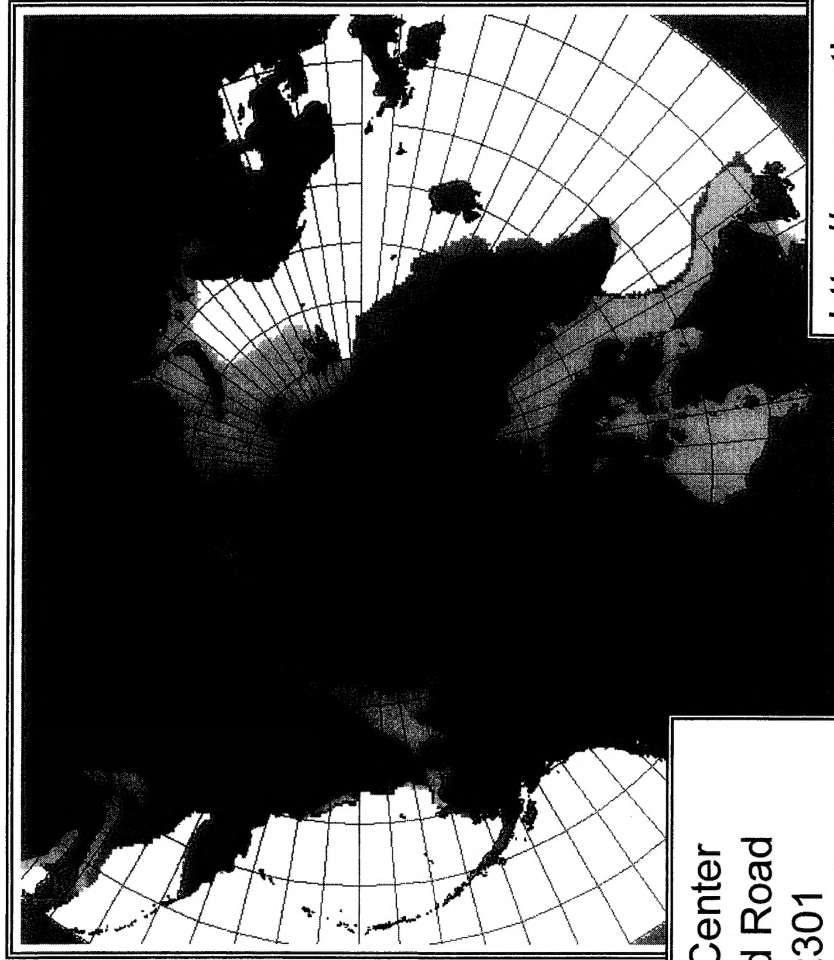




National Ice Center
Arctic Sea Ice Atlas
1996

19990722 020



National Ice Center
4251 Suitland Road
FB4, Room 2301
Washington D.C. 20395

<http://www.natice.noaa.gov>

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PREFACE

The National Ice Center (NIC), under sponsorship of the United States Navy, the United States Coast Guard, and the National Oceanic and Atmospheric Administration (NOAA), provides sea ice analyses encompassing the "Arctic" and the "Antarctic". These analyses continue the data set established under our previous name, the Joint Ice Center. These atlases continue the near real-time integration of remotely sensed data and point observations and differ only in that the Arctic and Antarctic are split into two separate publications per hemisphere per year.

This publication is the "Arctic Sea Ice Atlas" published in hard copy format by the NIC. The atlas contains weekly charts depicting the sea ice extent and coverage in the Northern Hemisphere from the first week of January through the last week of December 1996. Future annual atlases will be available in a digital format on CD-ROM through the National Snow and Ice Data Center (<http://www-nsidc.colorado.edu>). NSIDC is the official archive center for the NIC.

The NIC uses a wide variety of data sources in the production of sea ice analyses. Table 1 lists the data sources used to produce the Arctic weekly ice analyses contained in this publication. The line types used in the analyses provide metadata information with regard to sensor type. Solid lines depict boundaries derived from: point observations, Defense Meteorological Satellite Program Operational Line Scan (DMSP OLS) and NOAA Advanced Very High Resolution Radiometer (AVHRR) data. Dash-dash-dotted lines depict boundaries derived from DMSP Special Sensor Microwave Imager (SSM/I), and dashed lines depict boundaries derived from forecast models and climatology.

Please direct questions or comments to the NIC Liaison Branch, at phone number (301) 457-5303 extension 311 or 303, facsimile number (301)457-5300, or electronic mail address: liaison@natice.noaa.gov

From	To	Sensor Platform	Sensor and Type	Spectral Region	Resolution	Coverage
01-96	12-96	DMSP F-10, 11, 12, 13	OLS Fine: VIS IR SSM/I	0.4 to 1.1 μm 10.2 to 12.8 μm 19.35 and 37GHz	0.55 km 25 km	3,012km 3,012km
01-96	12-96	NOAA 12, 14	AVHRR: HRPT/LAC VIS NIR IR	0.58 to 0.68 μm 0.72 to 1.10 μm 3.55 to 3.93 μm	1.1km at nadir; 2.5km at swath edge	4,000km
01-96	12-96	RADARSAT	AMI SAR	C- Band (5.3 GHz)	100km	500km

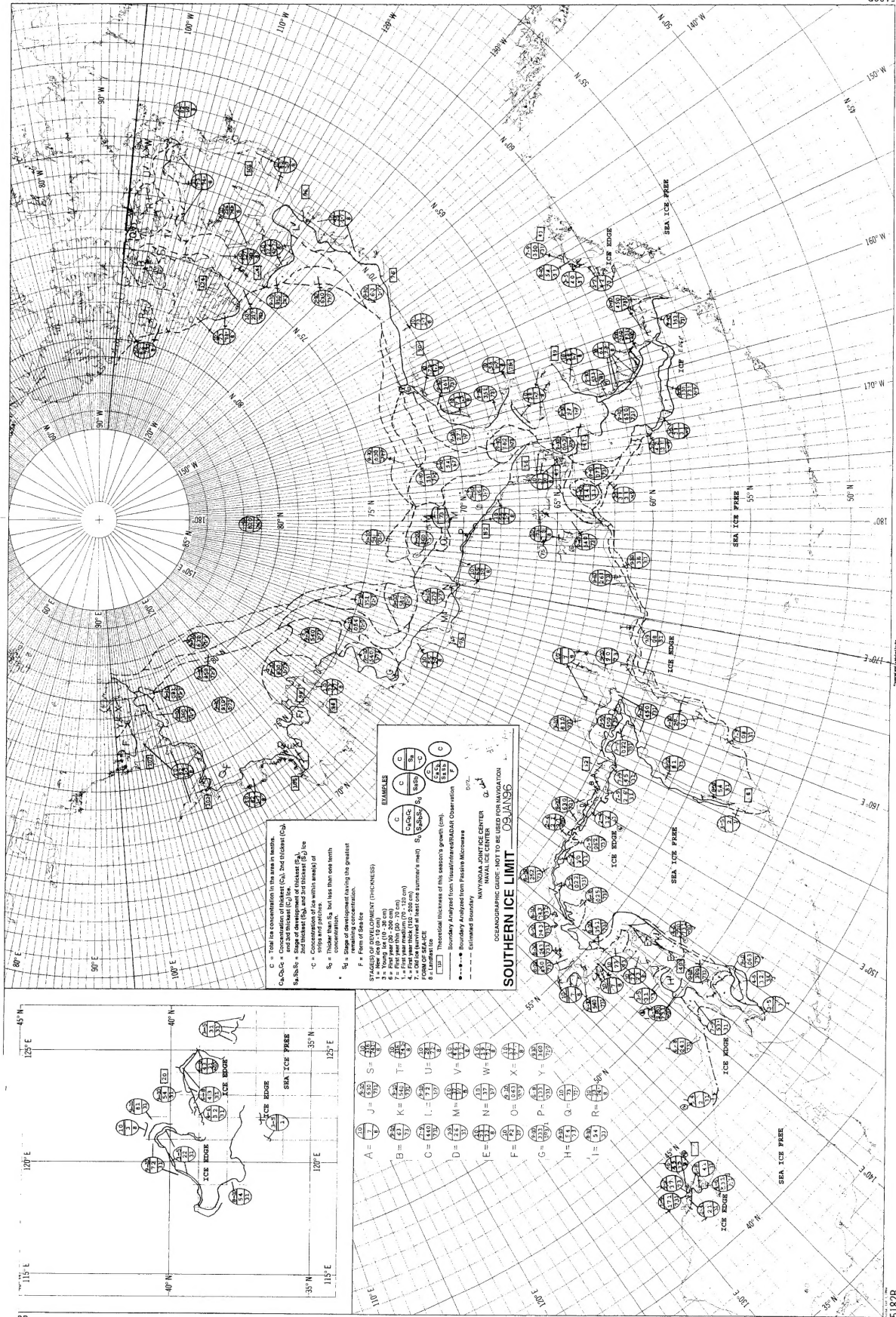
TABLE 1. 1996 Arctic Satellite Data Sources

Abbreviations and Acronyms:

AMI- Active Microwave Sensor
 AVHRR- Advanced Very High Resolution Radiometer
 cm- centimeter
 ERS- Earth Remote Sensing Satellite
 GHz- GigaHertz
 HRPT- High Resolution Picture transmission
 IR- Infrared
 km- kilometer
 LAC- Local Area Coverage
 NIR- Near Infrared
 OLS- Operational Linescan System
 RADARSAT- Radar Satellite
 SAR- Synthetic Aperture Radar
 SSM/I- Special Sensor Microwave Imager
 μm - micrometer
 VIS- Visible
 RADARSAT- Radar Satellite
 SAR- Synthetic Aperture Radar

Prepared under the authority of Commander, Naval Oceanography Command,
 Stennis Space Center, MS 39529-5000



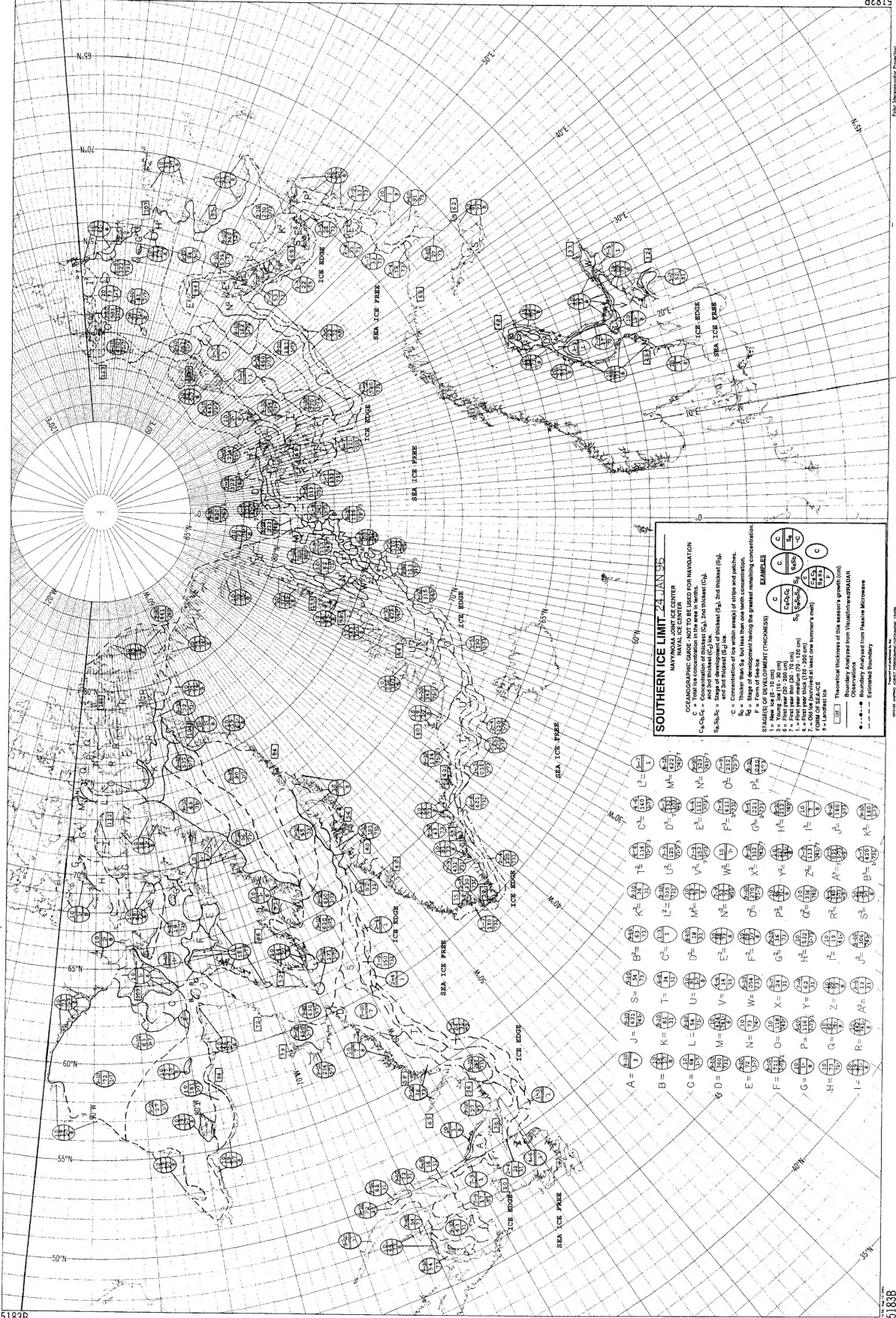








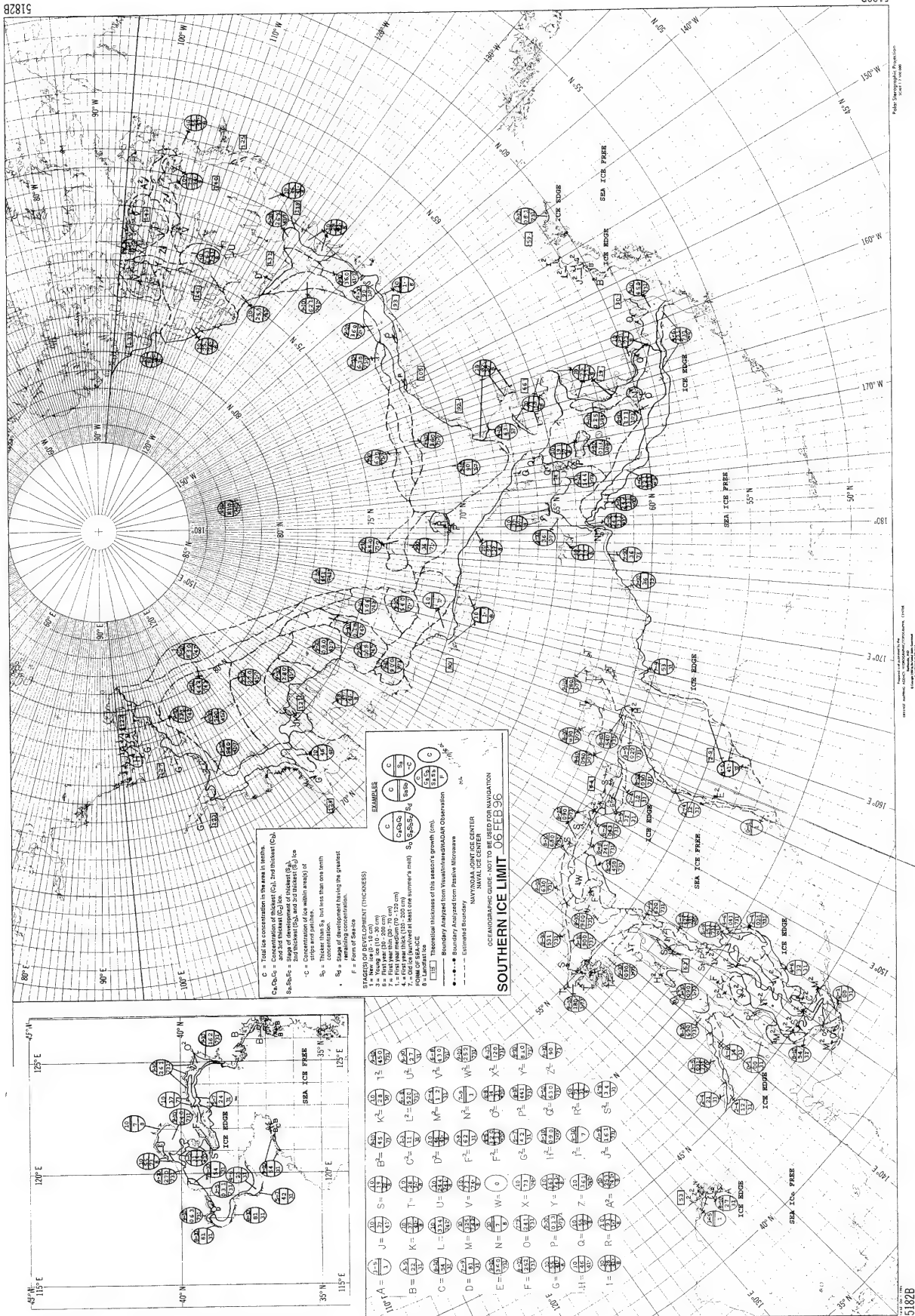


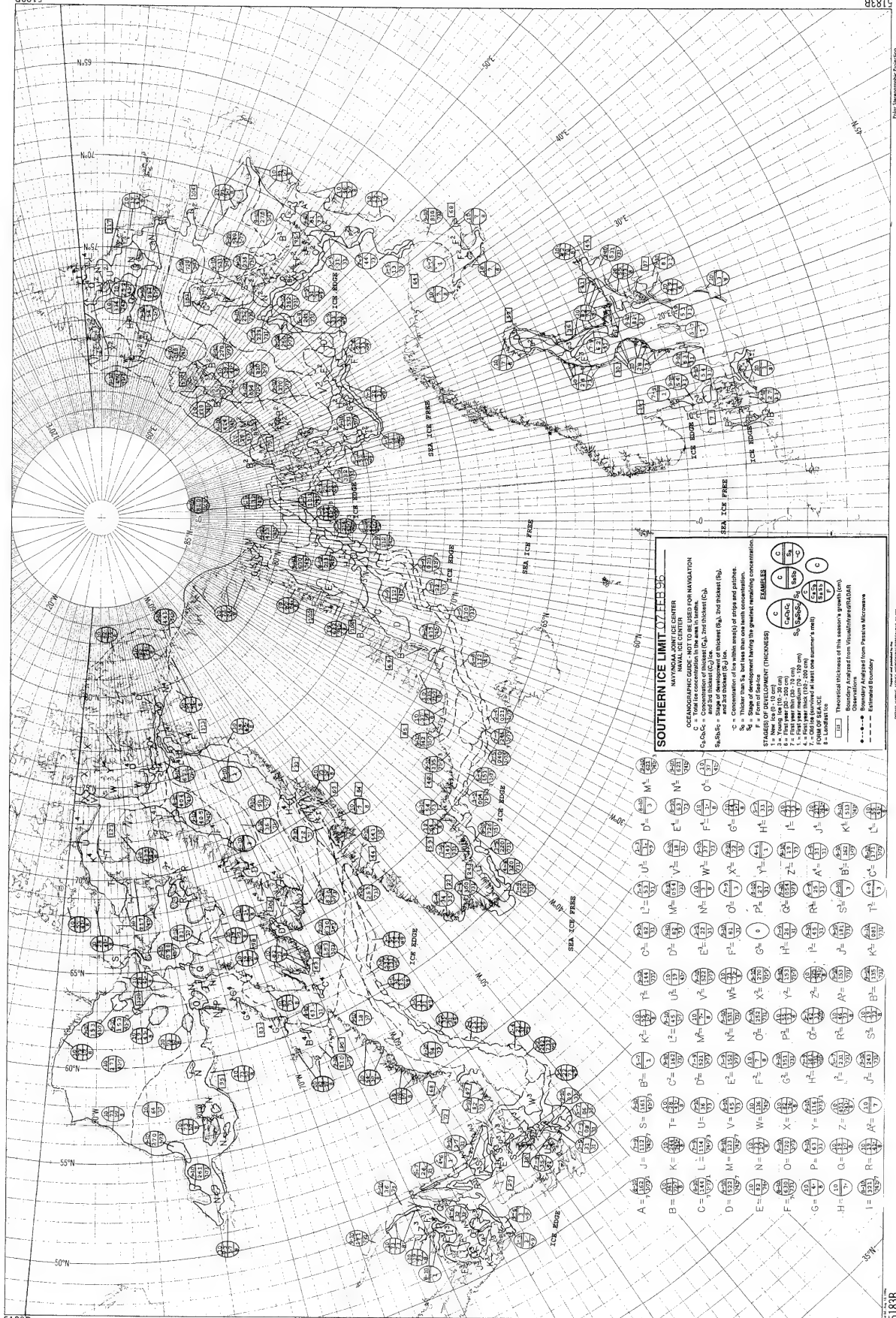


SOUTHERN ICE LIMIT 21 JAN 95
NAVY/NOAA JOINT ICE CENTER
OCEANOGRAPHIC CHARTS, NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = 1st, 2nd, and 3rd highest ice concentrations in the area in tenths.
C₁ = 1st highest ice concentration in the area in tenths.
C₂ = 2nd highest ice concentration in the area in tenths.
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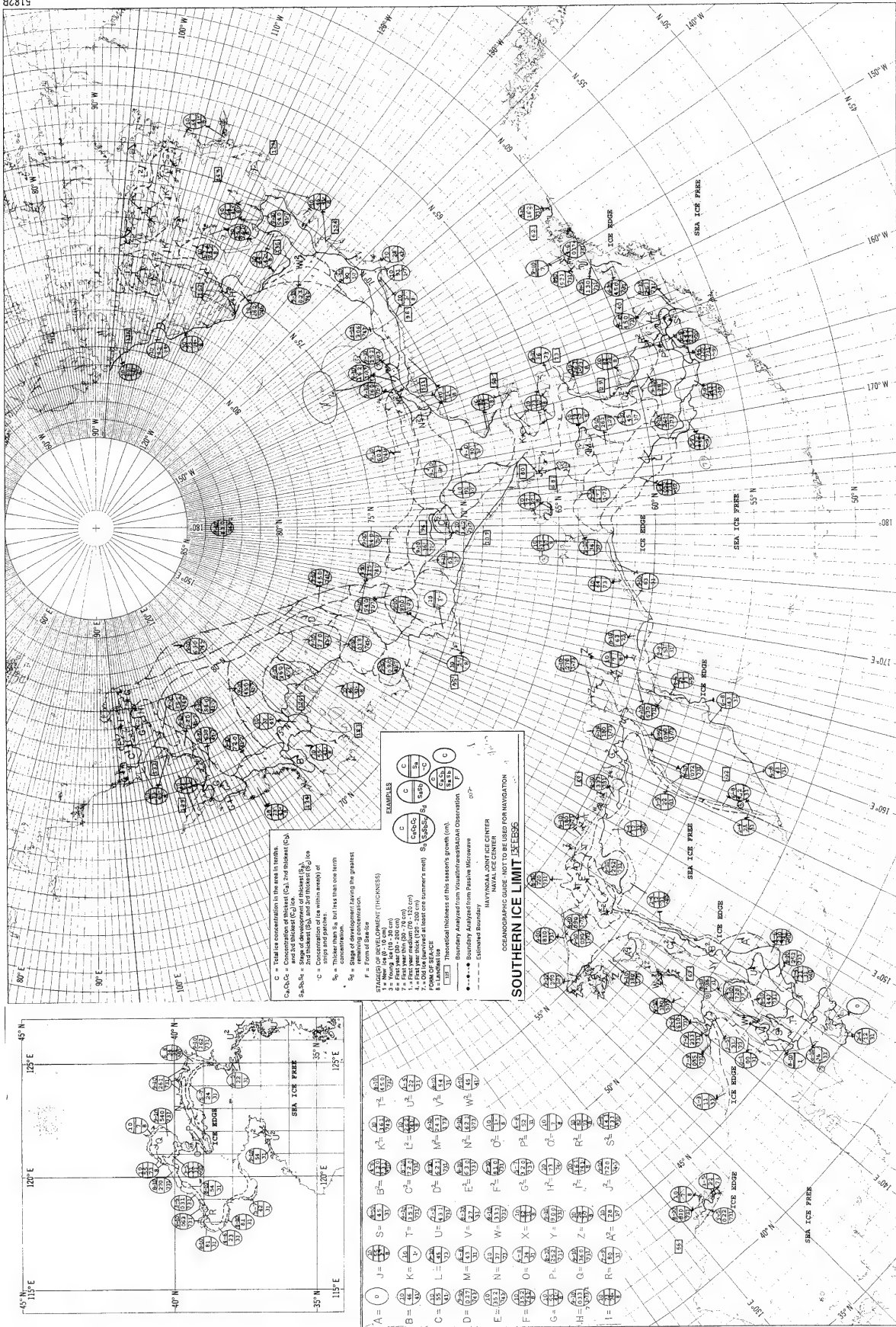


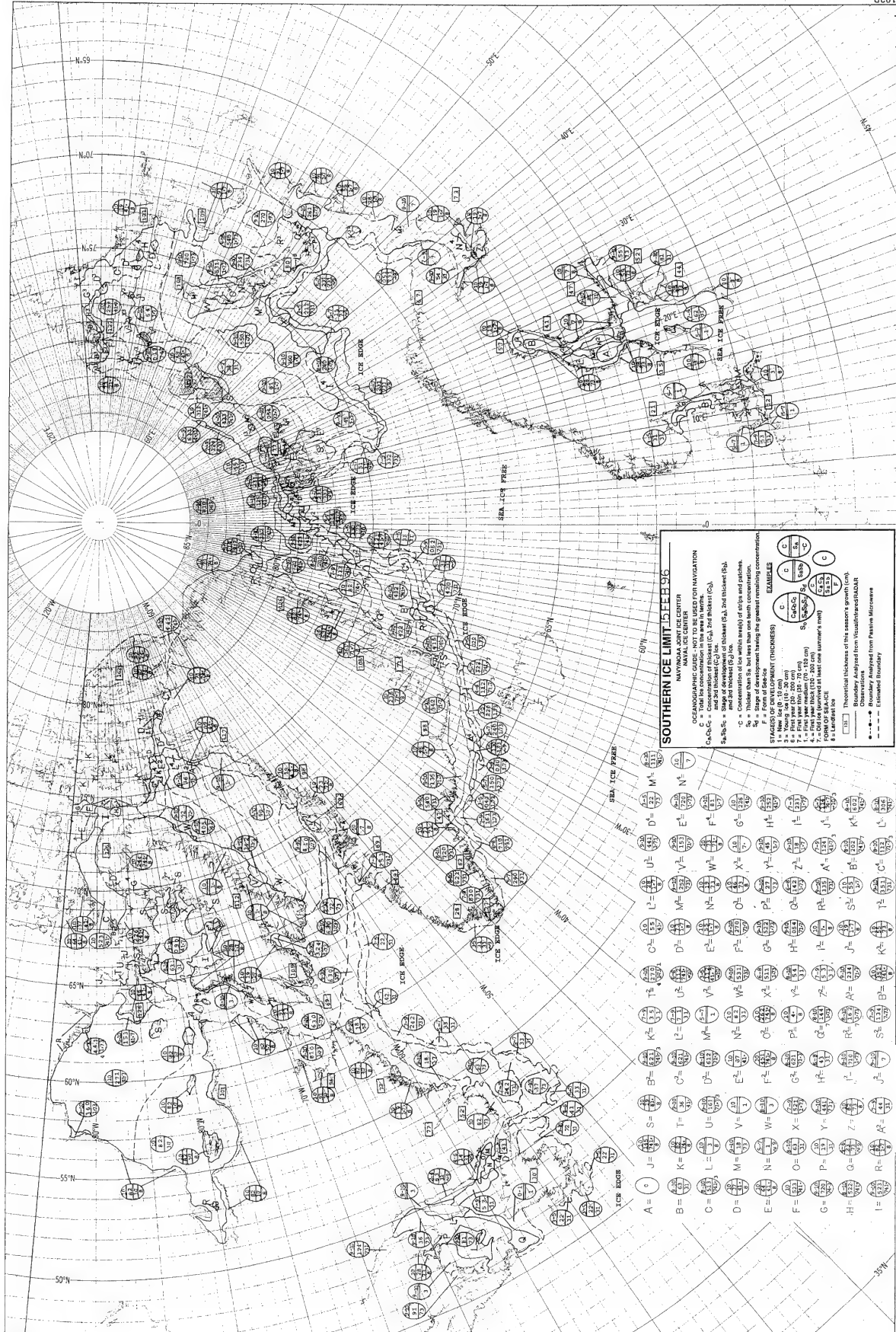


SOUTHERN ICE LIMIT 07 FEB 56

NAVY/Joint ICE CENTER
NATURAL ICE CENTER
OCEANOGRAPHIC DIVISION FOR NAVIGATION

SYMBOLS:
C = Total ice concentration in the area in tenths.
C₁ = Ice concentration in the area in tenths.
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C₁₀₀ = Ice concentration in the area in tenths.





SOUTHERN ICE LIMIT FEB 36

NAVY/NAVY CENTER
NAVAL ICE CENTER

COMMANDEER'S OFFICE FOR NAVIGATION
C = Total ice concentration in the area in terms.

Ca/Cb/Cc = Concentration of thickest (Ca), 2nd thickest (Cb), and thickest (Cc).

Stages of development (thickness):

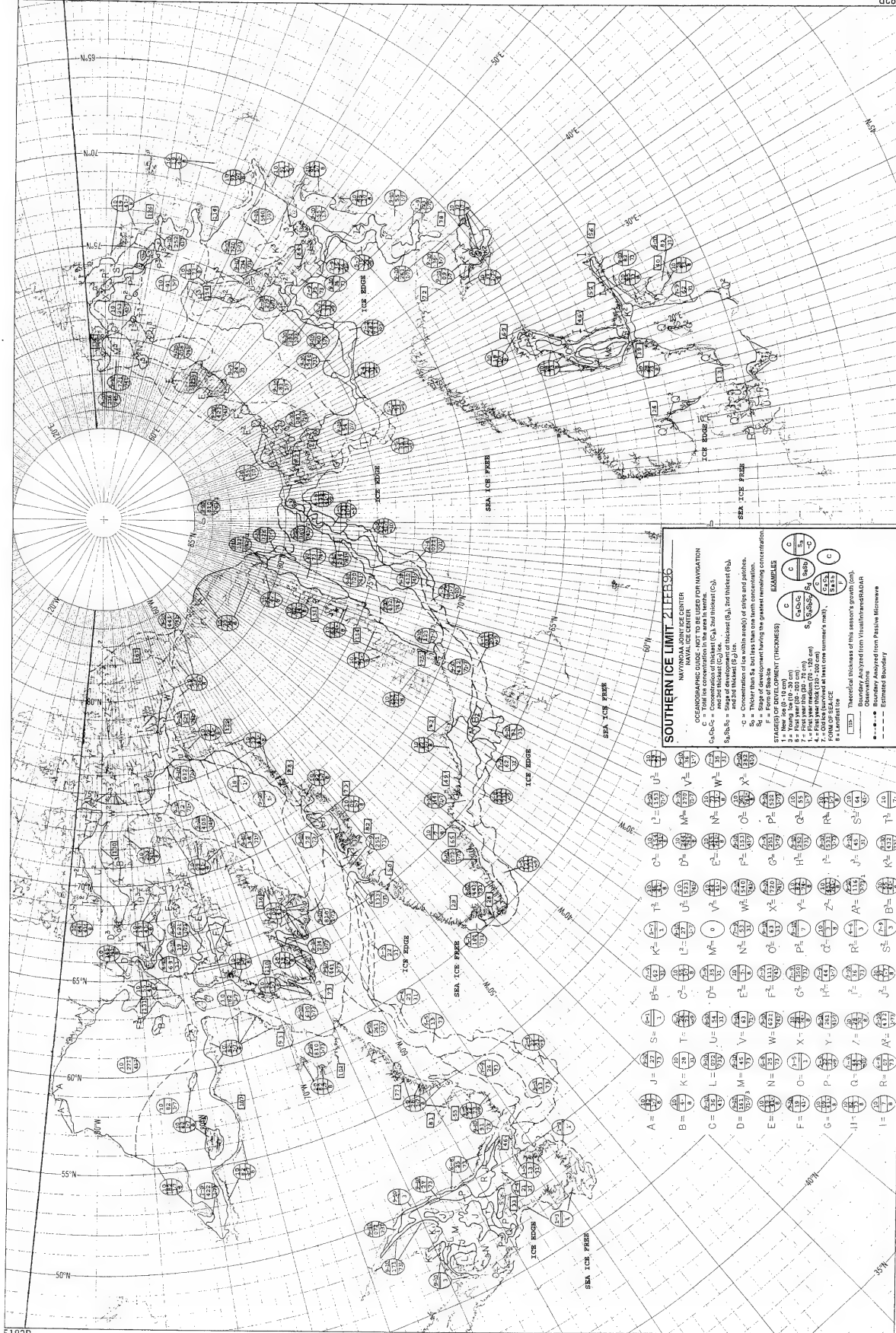
- 1 = Thin ice (less than 10 cm)
- 2 = Young ice (10-20 cm)
- 3 = First year ice (20-30 cm)
- 4 = First year ice (30-40 cm)
- 5 = First year ice (40-50 cm)
- 6 = First year ice (50-60 cm)
- 7 = Old ice (survived at least one summer's melt)
- 8 = Landfast ice

EXAMPLES:

1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

Legend:

- 121 Theoretical thickness of this season's growth (cm)
- Boundary Analyzed from Visual/Passive Radar
- Boundary Analyzed from Visual/Passive Radar
- Unanalyzed Boundary



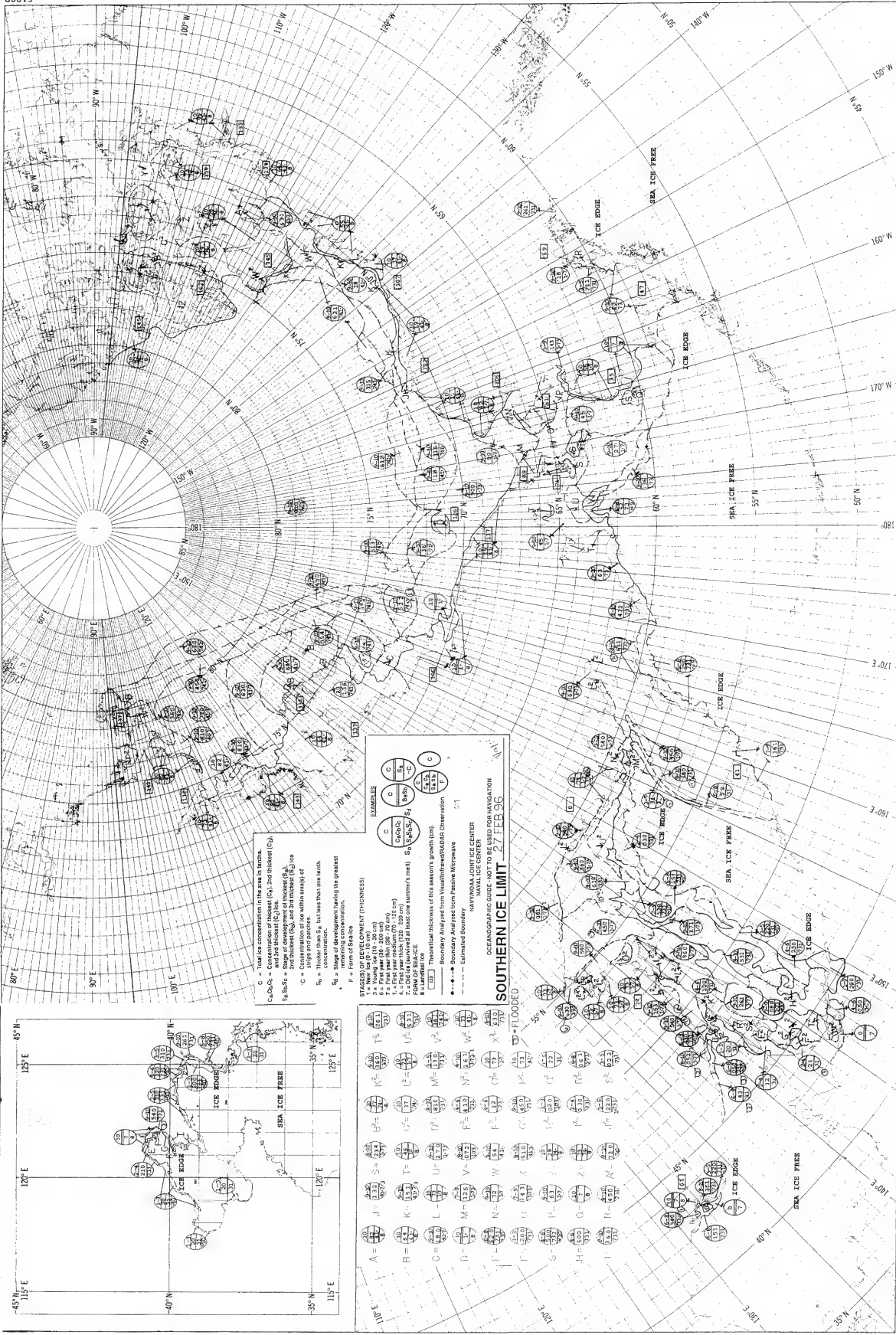
SOUTHERN ICE LIMIT 21 FEB 56
NAVYAL CENTER
NAVAL ICE CENTER

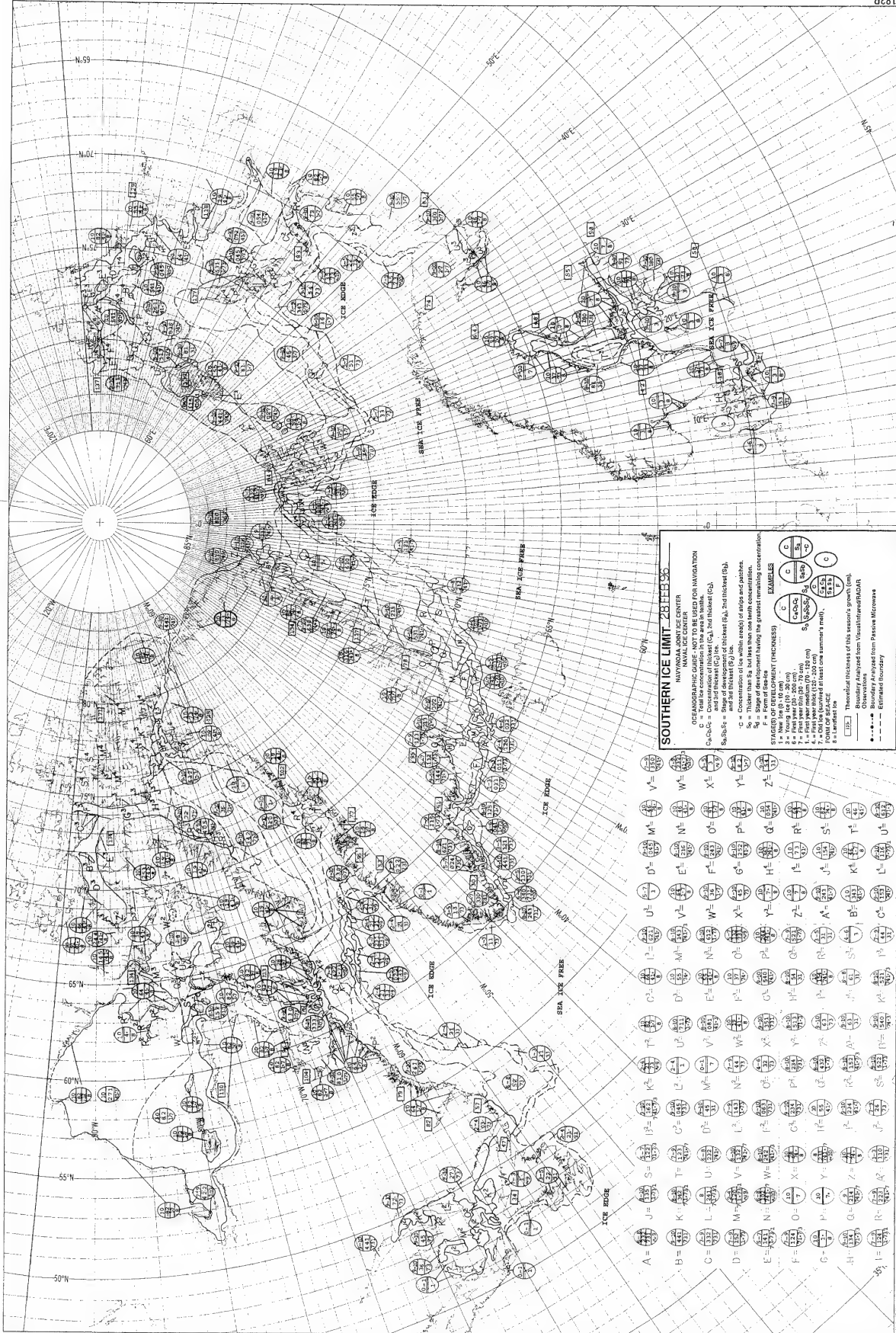
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C₁C₂C₃C₄ = Concentration of thickest (C₁), 2nd thickest (C₂),
and 3rd thickest (C₃)
R₁R₂R₃ = Stage of development of thickest (R₁), 2nd thickest (R₂),
and 3rd thickest (R₃)
S₁S₂S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂),
and 3rd thickest (S₃)
T₁T₂T₃ = Stage of development of thickest (T₁), 2nd thickest (T₂),
and 3rd thickest (T₃)
W₁W₂W₃ = Stage of development of thickest (W₁), 2nd thickest (W₂),
and 3rd thickest (W₃)
X₁X₂X₃ = Stage of development of thickest (X₁), 2nd thickest (X₂),
and 3rd thickest (X₃)
Y₁Y₂Y₃ = Stage of development of thickest (Y₁), 2nd thickest (Y₂),
and 3rd thickest (Y₃)
Z₁Z₂Z₃ = Stage of development of thickest (Z₁), 2nd thickest (Z₂),
and 3rd thickest (Z₃)

STAGES OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = First year ice (10 - 200 cm)
3 = First year ice (200 - 300 cm)
4 = First year ice (300 - 400 cm)
5 = First year ice (400 - 500 cm)
6 = First year ice (500 - 600 cm)
7 = Old ice (600 - 700 cm)
8 = Old ice (700 - 800 cm)
9 = Old ice (800 - 900 cm)
10 = Old ice (900 - 1000 cm)

EXAMPLES
C₁C₂C₃C₄ = C₁C₂C₃C₄
R₁R₂R₃ = R₁R₂R₃
S₁S₂S₃ = S₁S₂S₃
T₁T₂T₃ = T₁T₂T₃
W₁W₂W₃ = W₁W₂W₃
X₁X₂X₃ = X₁X₂X₃
Y₁Y₂Y₃ = Y₁Y₂Y₃
Z₁Z₂Z₃ = Z₁Z₂Z₃

100% Theoretical thickness of this season's growth
Boundary Analyzed from Visual Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary





Other Designations: Division
Scale: 1:500,000

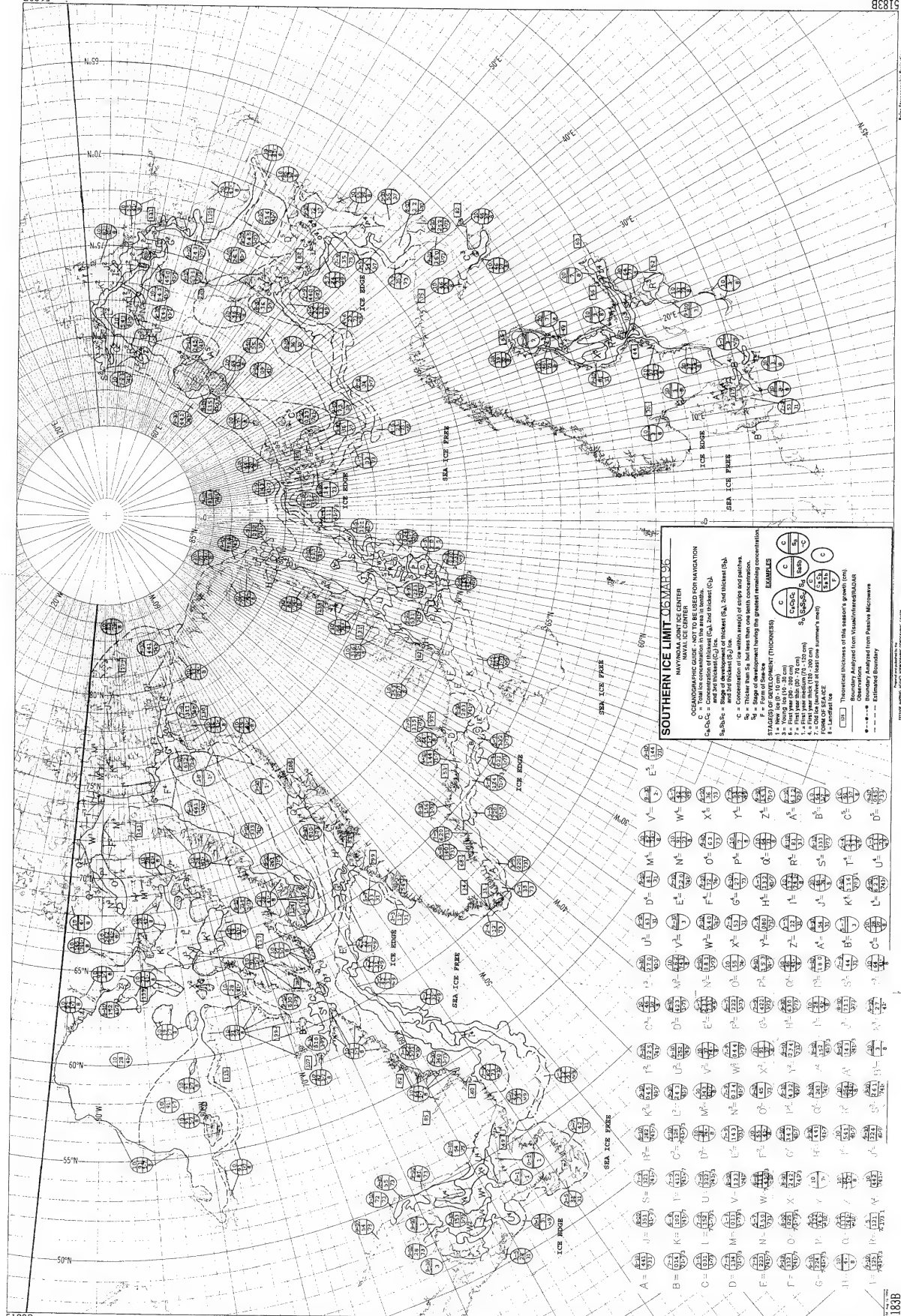
SOUTHERN ICE LIMIT 28 FEB 68

NAVYAL OCEANOGRAPHIC CENTER
NAVYAL OCEANOGRAPHIC CENTER
NAVYAL OCEANOGRAPHIC CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

CHARTS - 1. 1:500,000 Scale
2. 1:250,000 Scale
3. 1:125,000 Scale
4. 1:62,500 Scale
5. 1:31,250 Scale
6. 1:15,625 Scale
7. 1:7,812.5 Scale
8. 1:3,906.25 Scale
9. 1:1,953.125 Scale
10. 1:976.5625 Scale
11. 1:488.28125 Scale
12. 1:244.140625 Scale
13. 1:122.0703125 Scale
14. 1:61.03515625 Scale
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SOUTHERN ICE LIMIT 16 MAR 50

NAVY/NAVY JOINT ICE CENTER
OCEANOGRAPHIC GUIDE FOR NAVIGATION

ICE LIMITS

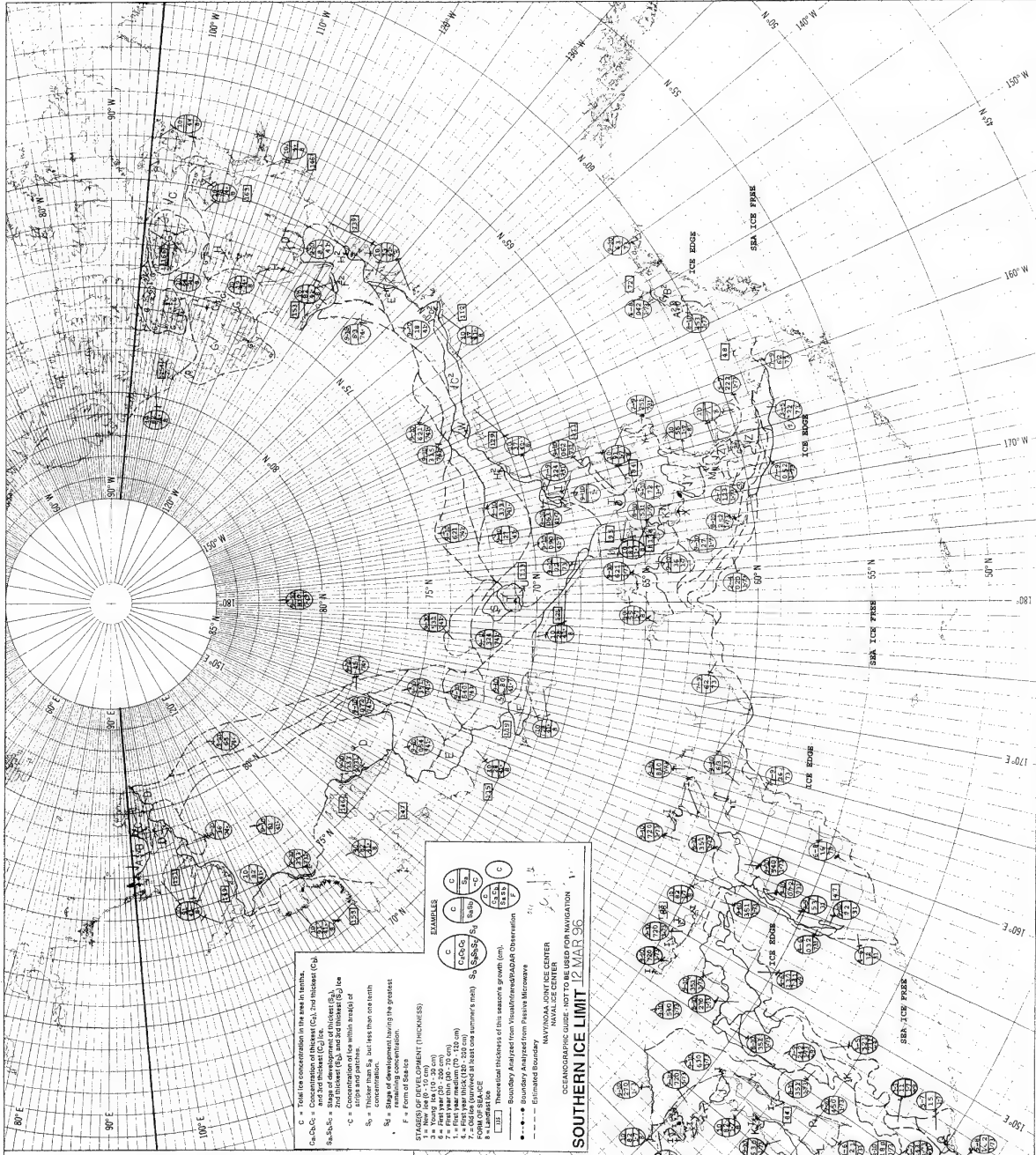
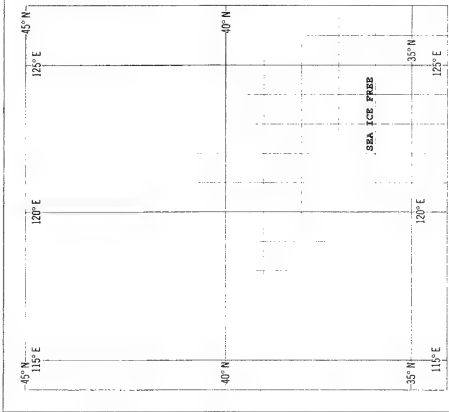
C = Total ice concentration in the area 100%
C₁C₂C₃ = and are included (C₁, 2nd thickest (C₂), 3rd thickest (C₃))
C₁C₂C₃ = Range of development of thickest (C₁), 2nd thickest (C₂), 3rd thickest (C₃)
C₁C₂C₃ = Concentration of ice within area(s) of origin and patches.
S₁ = Thicker than S₂, but less than one sixth concentration.
S₂ = Thinner than S₁, but less than one sixth concentration.
S₃ = Form of ice area

EXAMPLES

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NAVY/NAVY JOINT ICE CENTER
OCEANOGRAPHIC GUIDE FOR NAVIGATION

NAVY/NAVY JOINT ICE CENTER
OCEANOGRAPHIC GUIDE FOR NAVIGATION



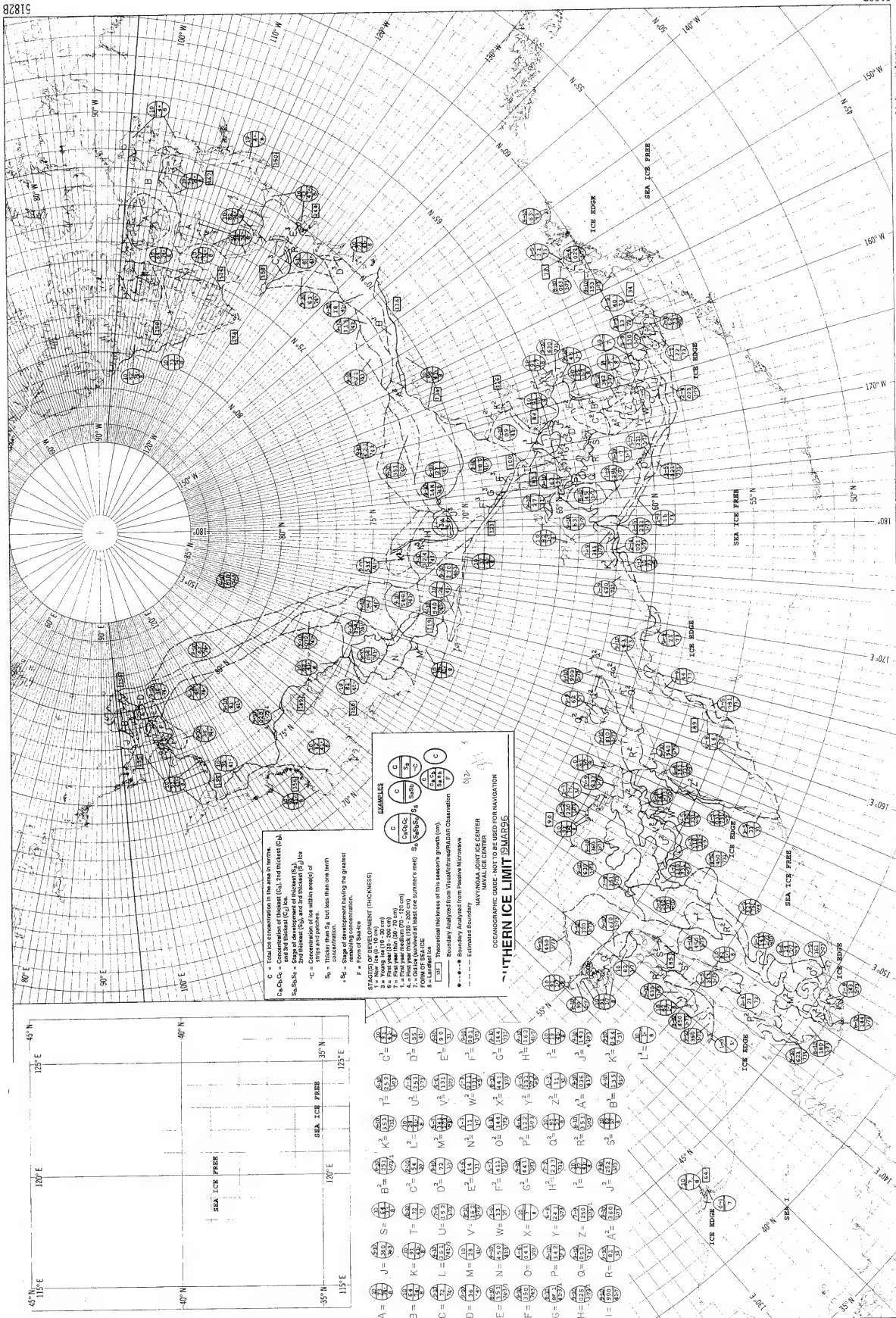
STAGES OF DEVELOPMENT (THICKNESS)

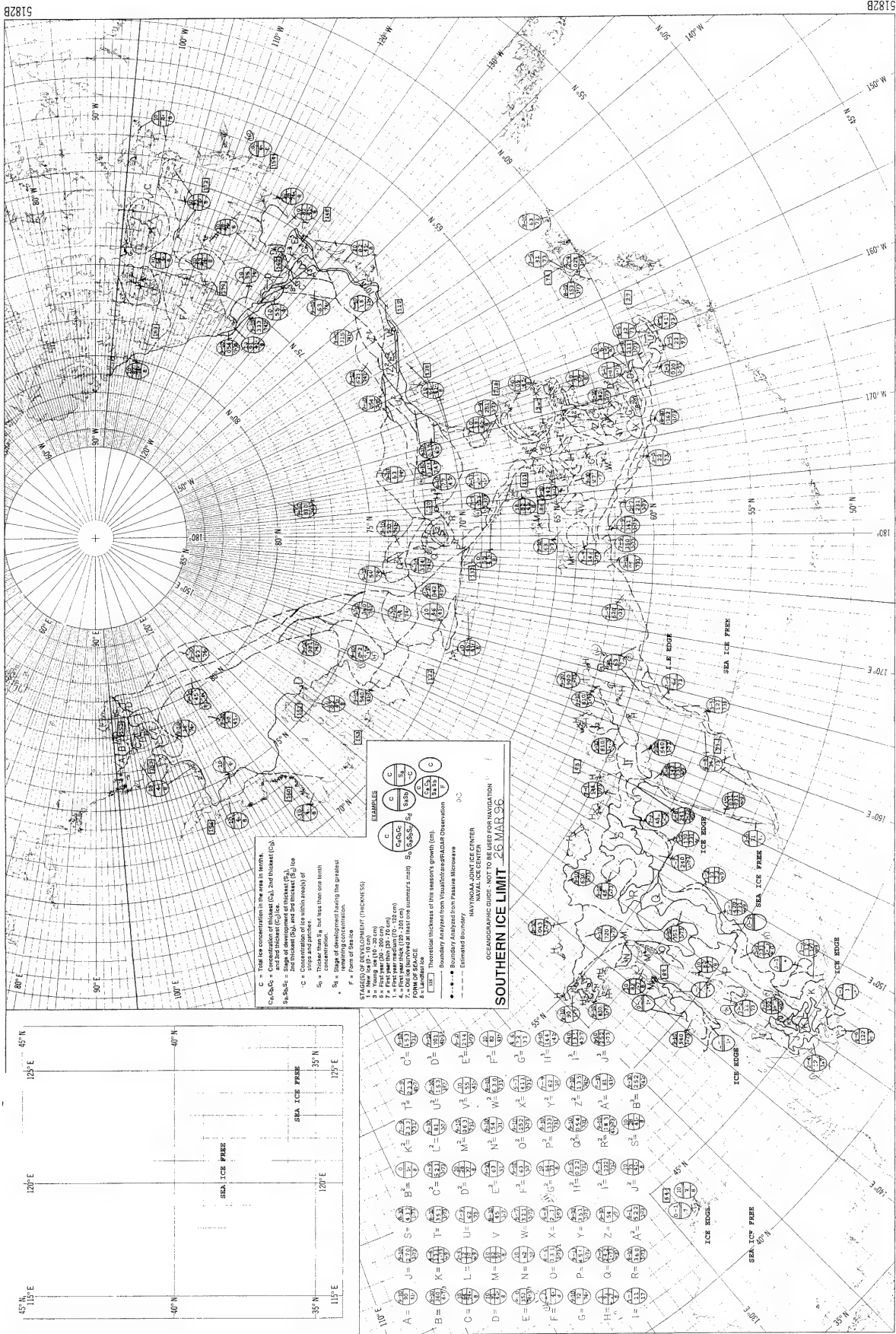
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2 = First year ice (30-70 cm)
3 = First year ice (70-100 cm)
4 = First year ice (100-150 cm)
5 = First year ice (150-200 cm)
6 = First year ice (200-250 cm)
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Polar Stereographic Projection



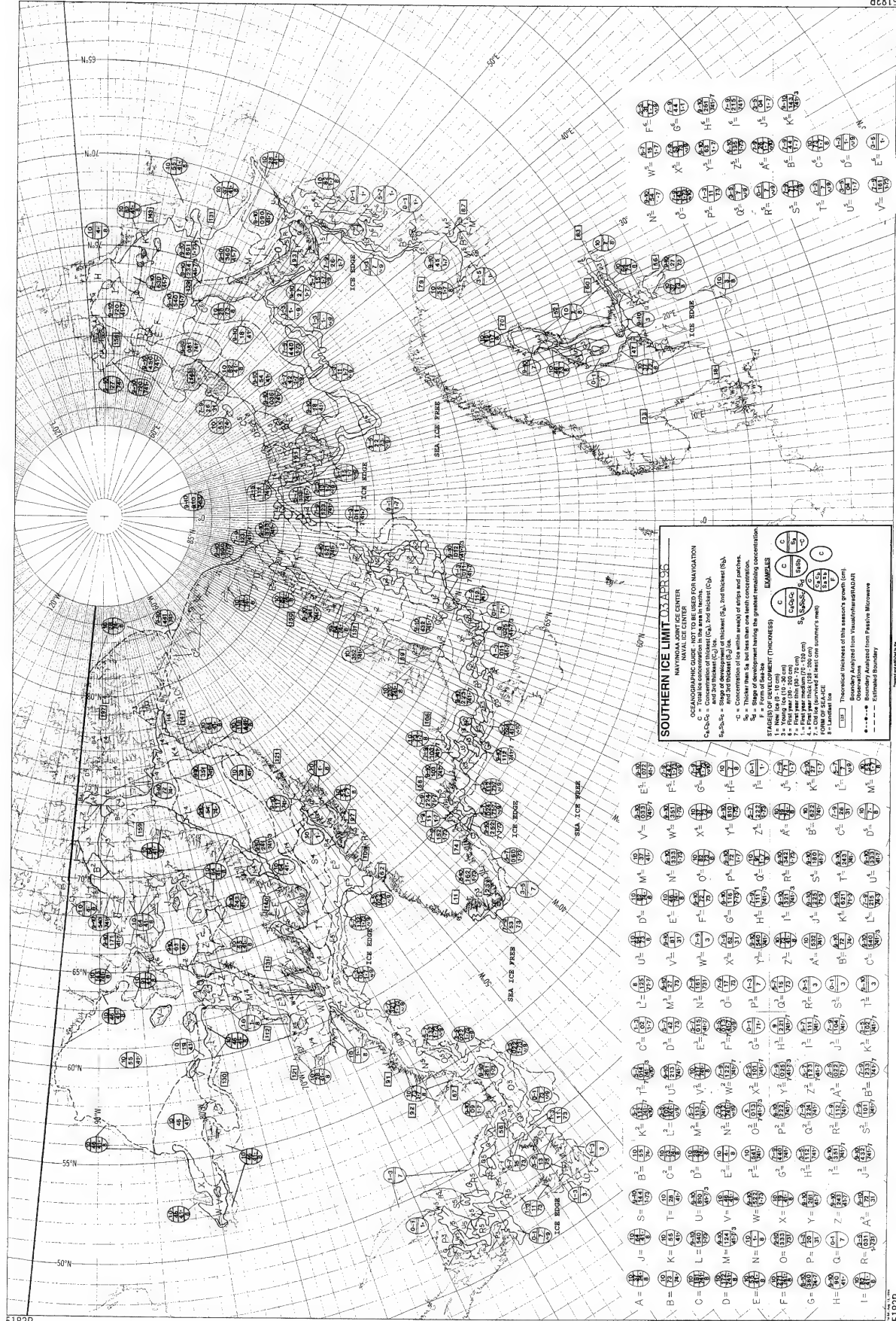




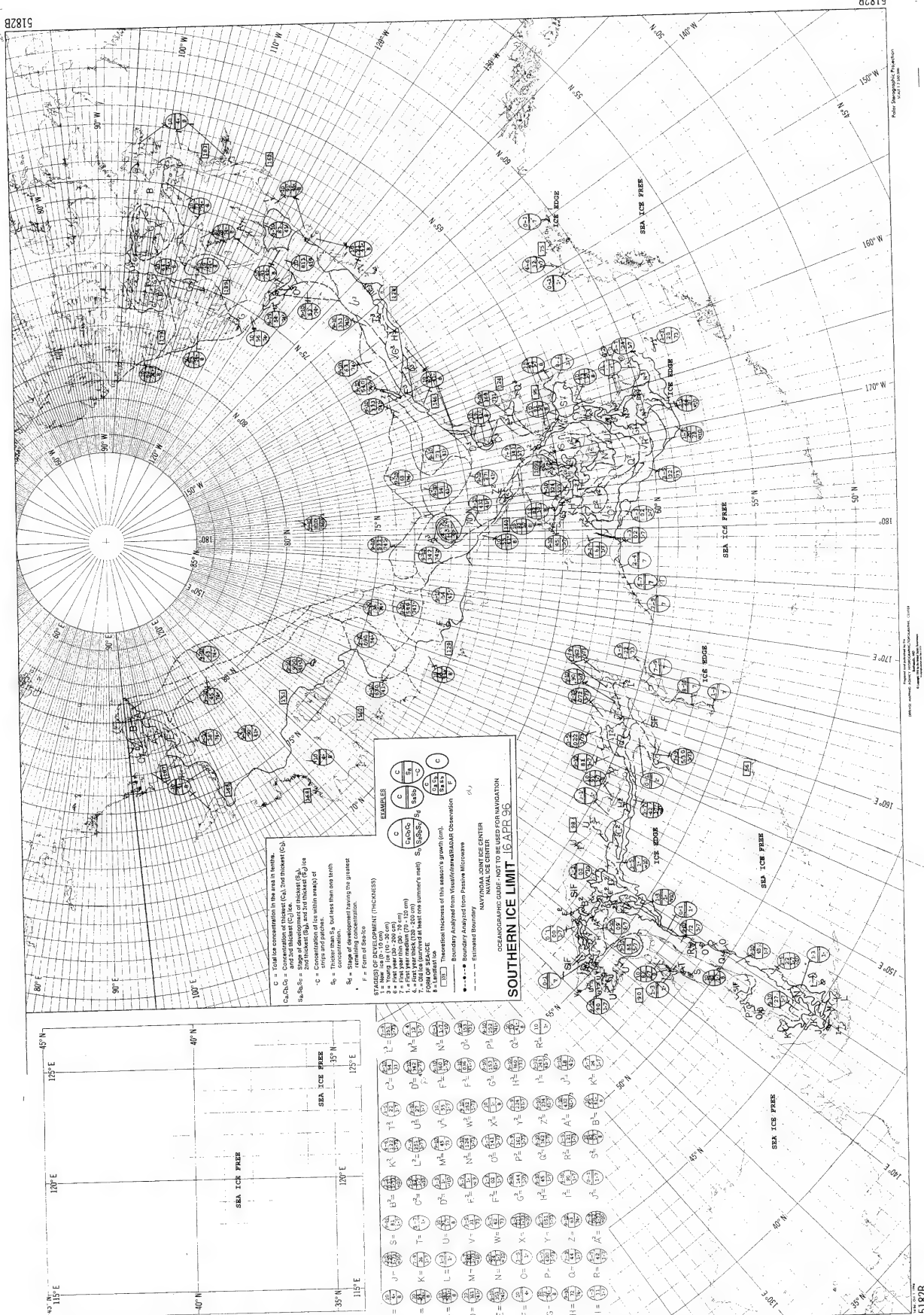
Public Domain Project
1996-2000

Public Domain Project
1996-2000

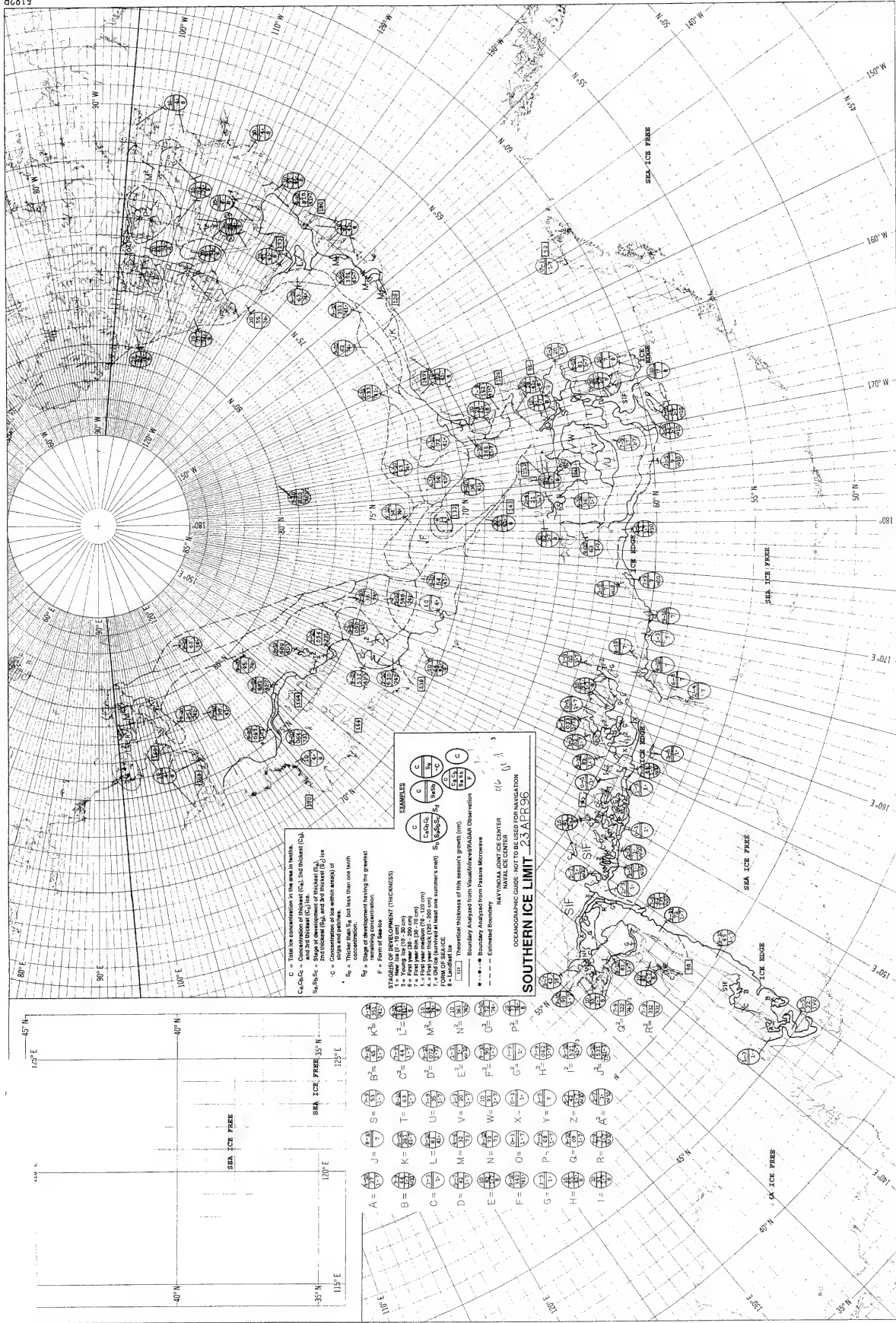


















NAVY/NOAA JOINT ICE CENTER

NAVAL ICE CENTER

= Total ice concentration in the area in tenths.

 C_2 = Concentration of thickest (C_2), 2nd thickest (C_2),

and 3rd thickest (C_G) ice.

and 3rd thickest (S_0) ice.

= Concentration of ice within area(s) of strips and patches.

- Thicker than SA but less than osteoblast concentration.
- Stage of development having the greatest cancellous concentration.

= Form of Sea-Ice

PERIOD OF DEVELOPMENT (THICKNESS) —
Ice (0 - 10 cm)

ing ice (10–30 cm)

1 year (30 - 200 cm)
1 year thin (30 - 70 cm).

1 year medium (70 - 120 cm)
1 year thick (120 - 200 cm)

ice (survived at least one summer's melt)

FAST ICE

Theoretical thickness of this season's growth (μm)

Boundary Analyzed from VisualInfraredRADAR

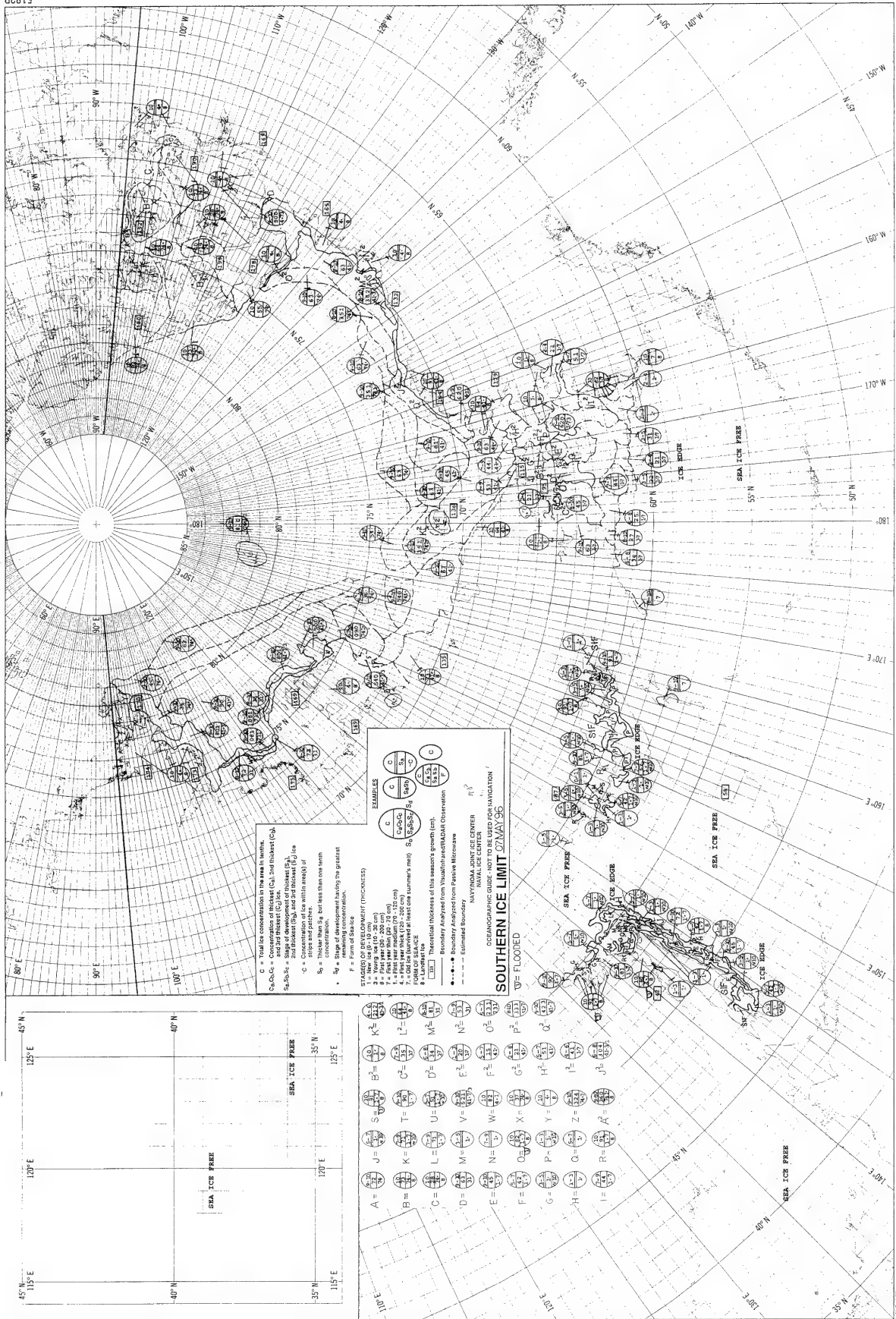
Observations
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- Boundary Analyzed from Passive Microwave
- Estimated Boundary

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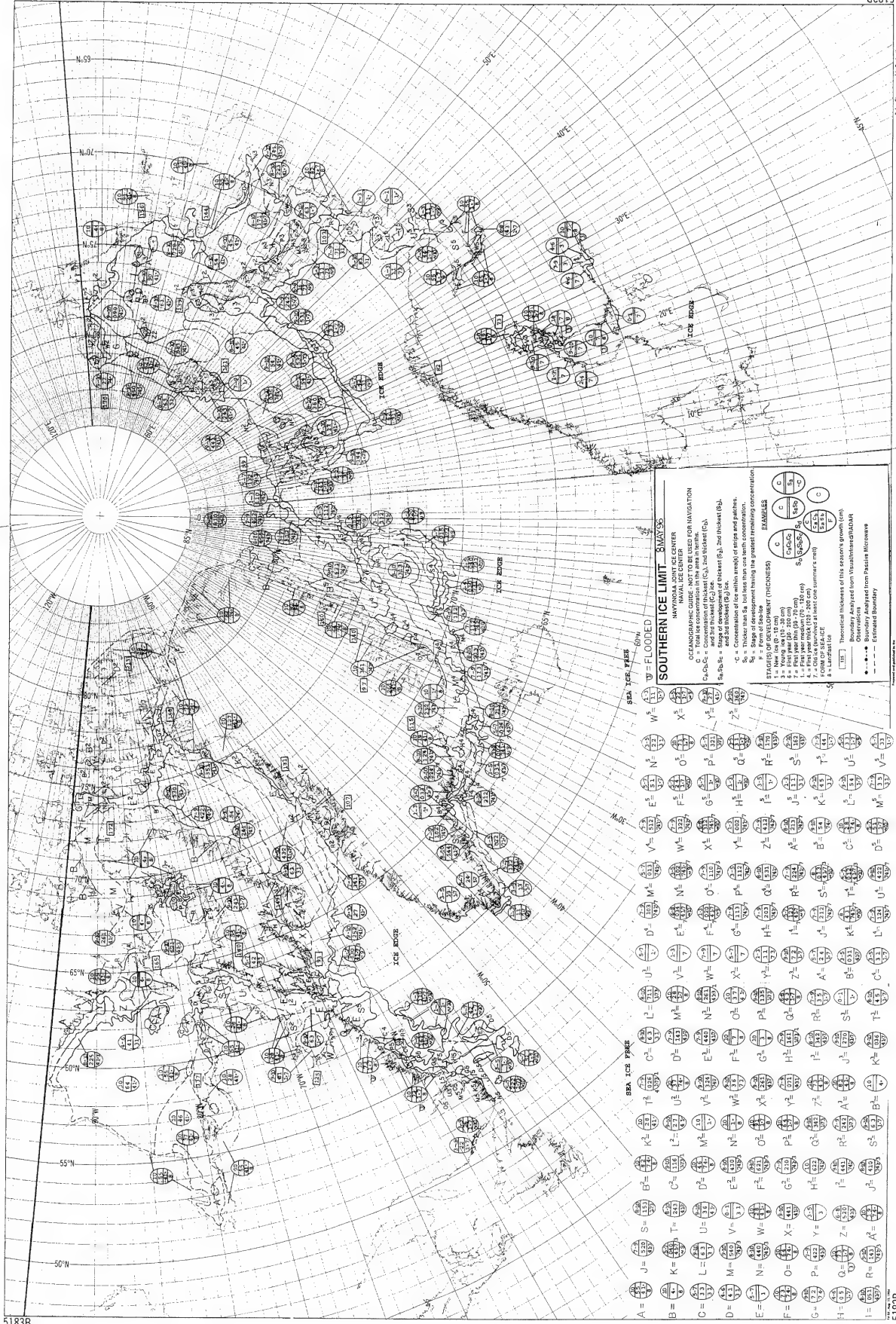


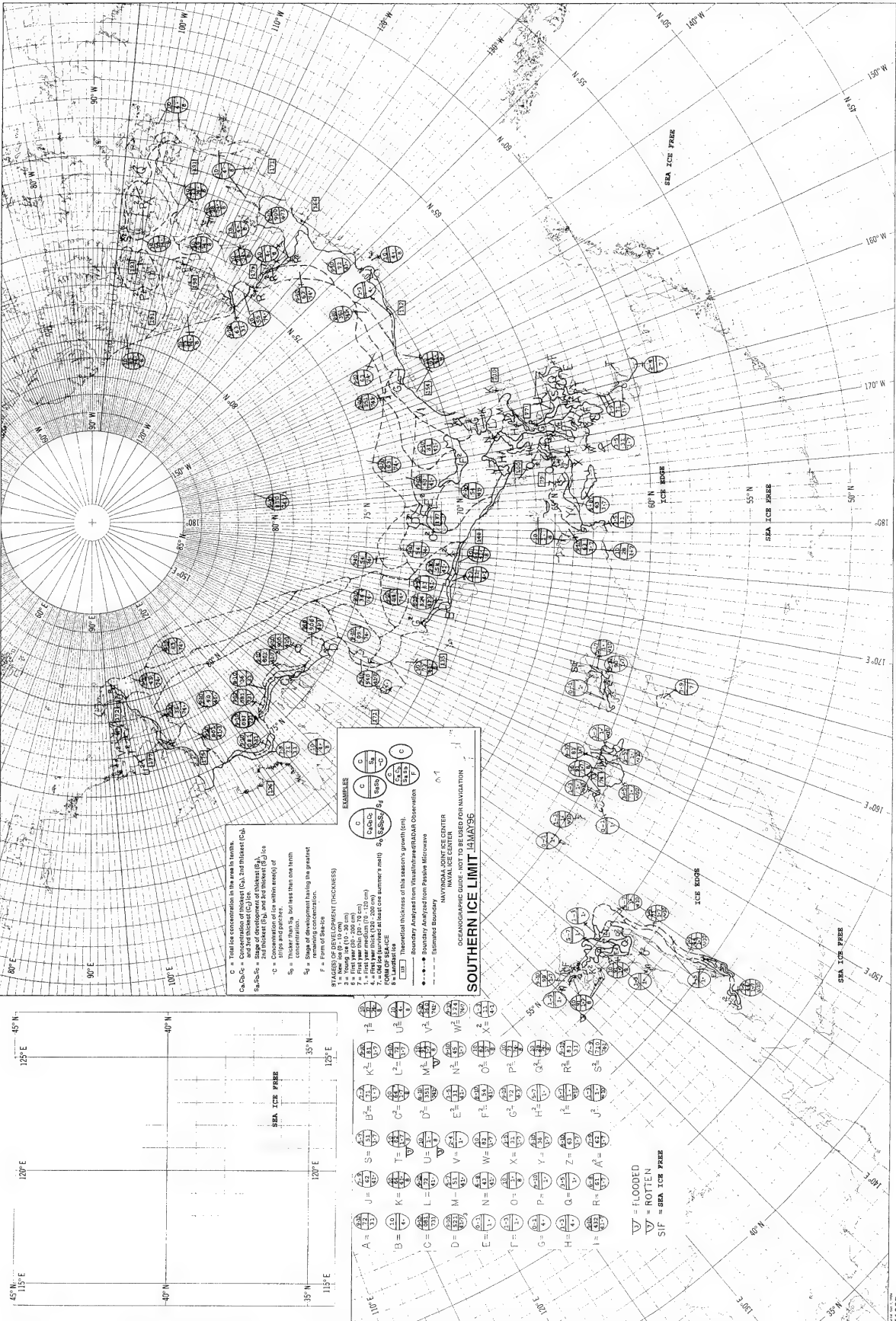
C = Total ice concentration in the area in square miles.
C₁, C₂, C₃ = Concentration of Backcast (C₁), and Backcast (C₂), and Backcast (C₃).
C₁, C₂, C₃ = Concentration of Backcast (C₁), and Backcast (C₂), and Backcast (C₃).
C = Concentration of ice within 100 miles of the coast.
S₁ = Thicker than S₂, but less than one term concentration.
S₂ = Thicker than S₃, but less than one term concentration.
S₃ = Thicker than S₄, but less than one term concentration.
F = Form of sea ice.

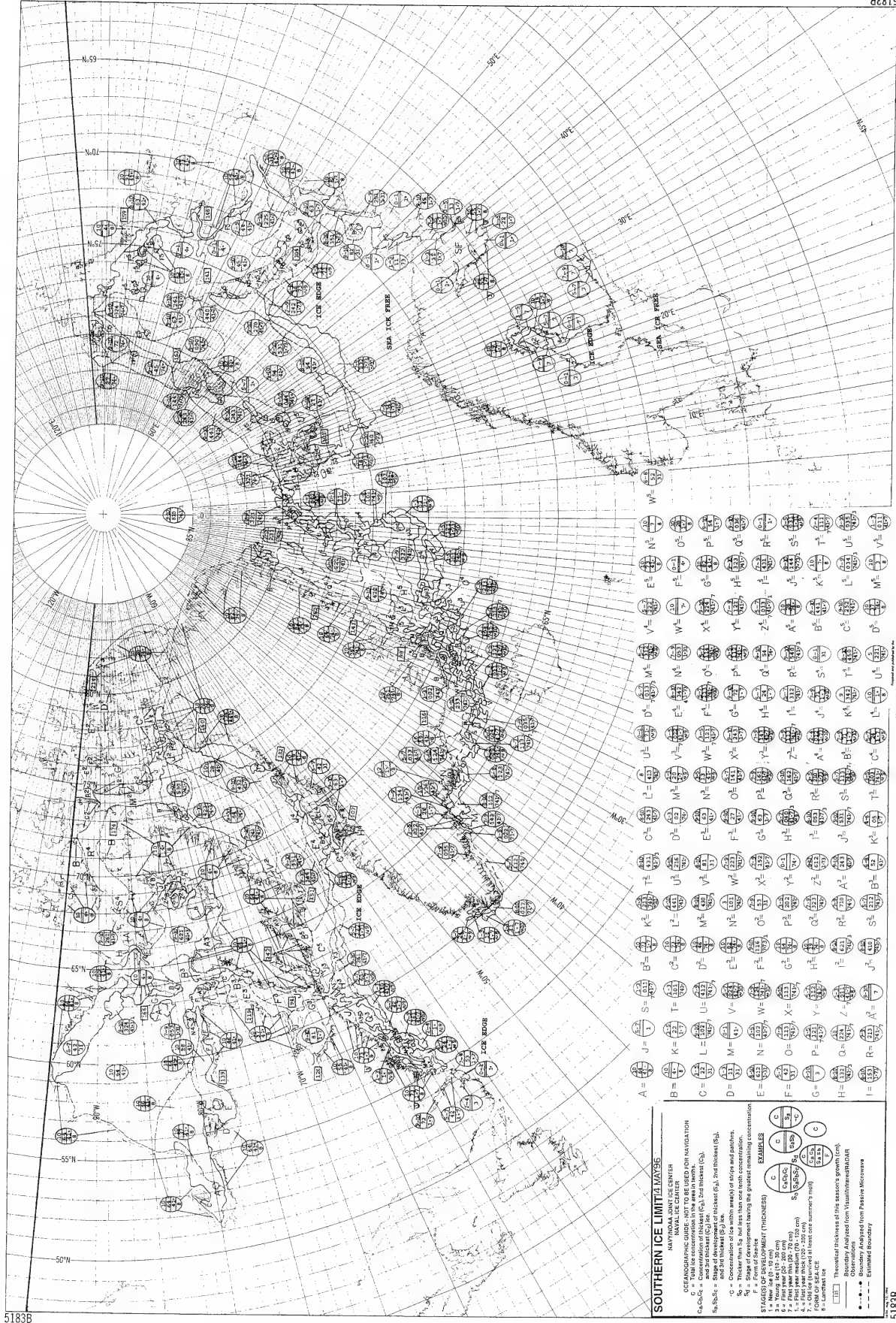
TABLES

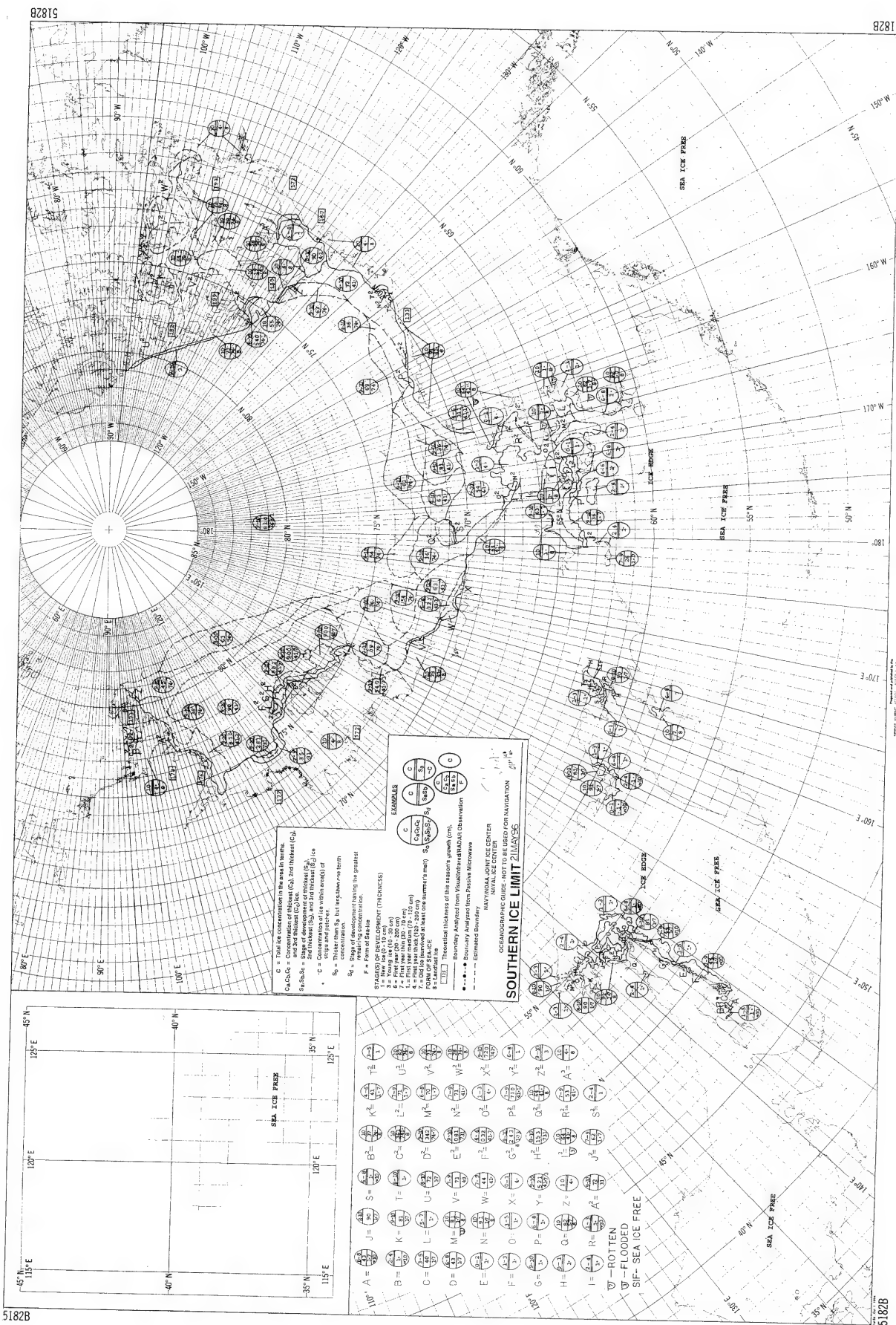
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NAVY NAUTICAL CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
SOUTHERN ICE LIMIT 07 MAY 95



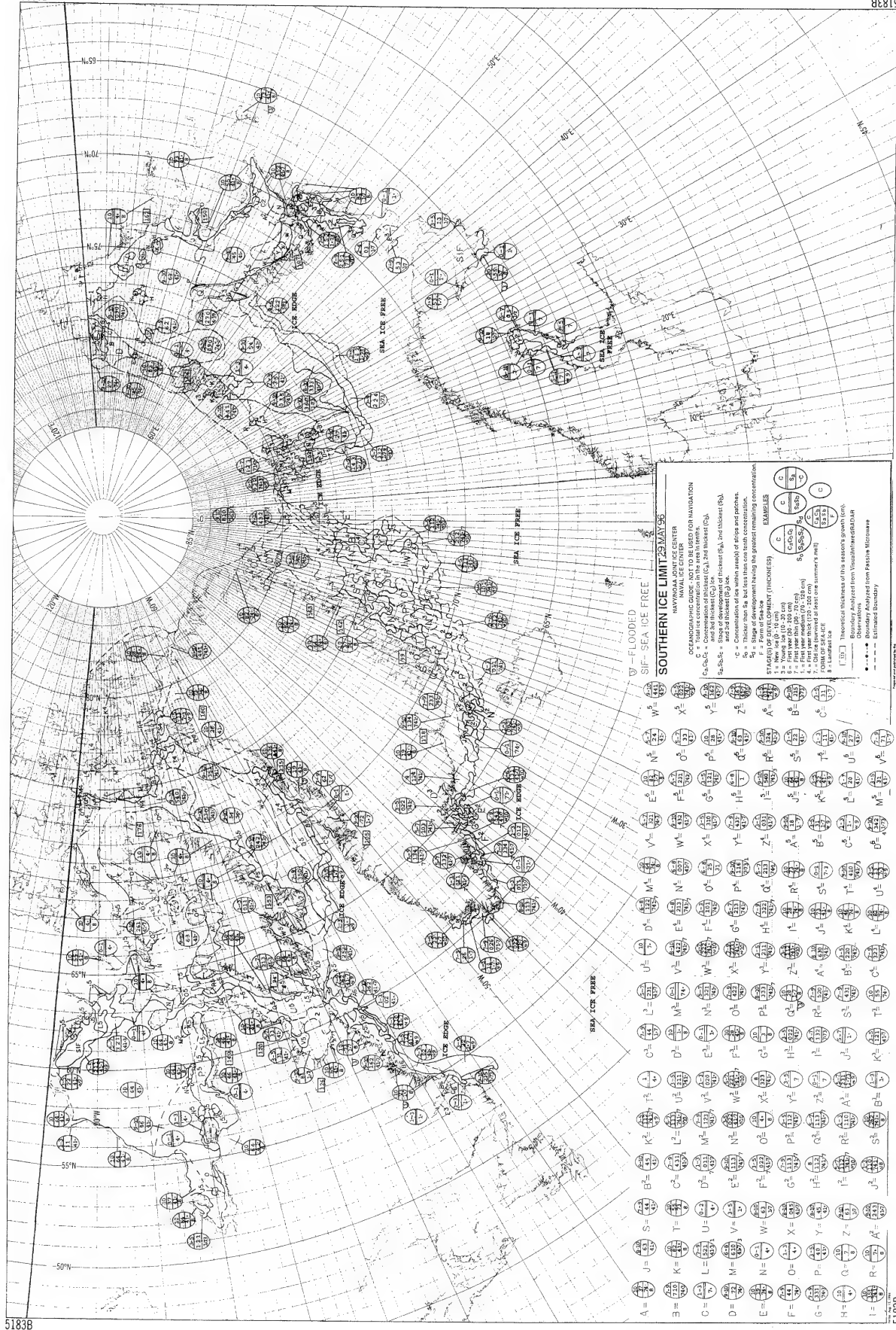




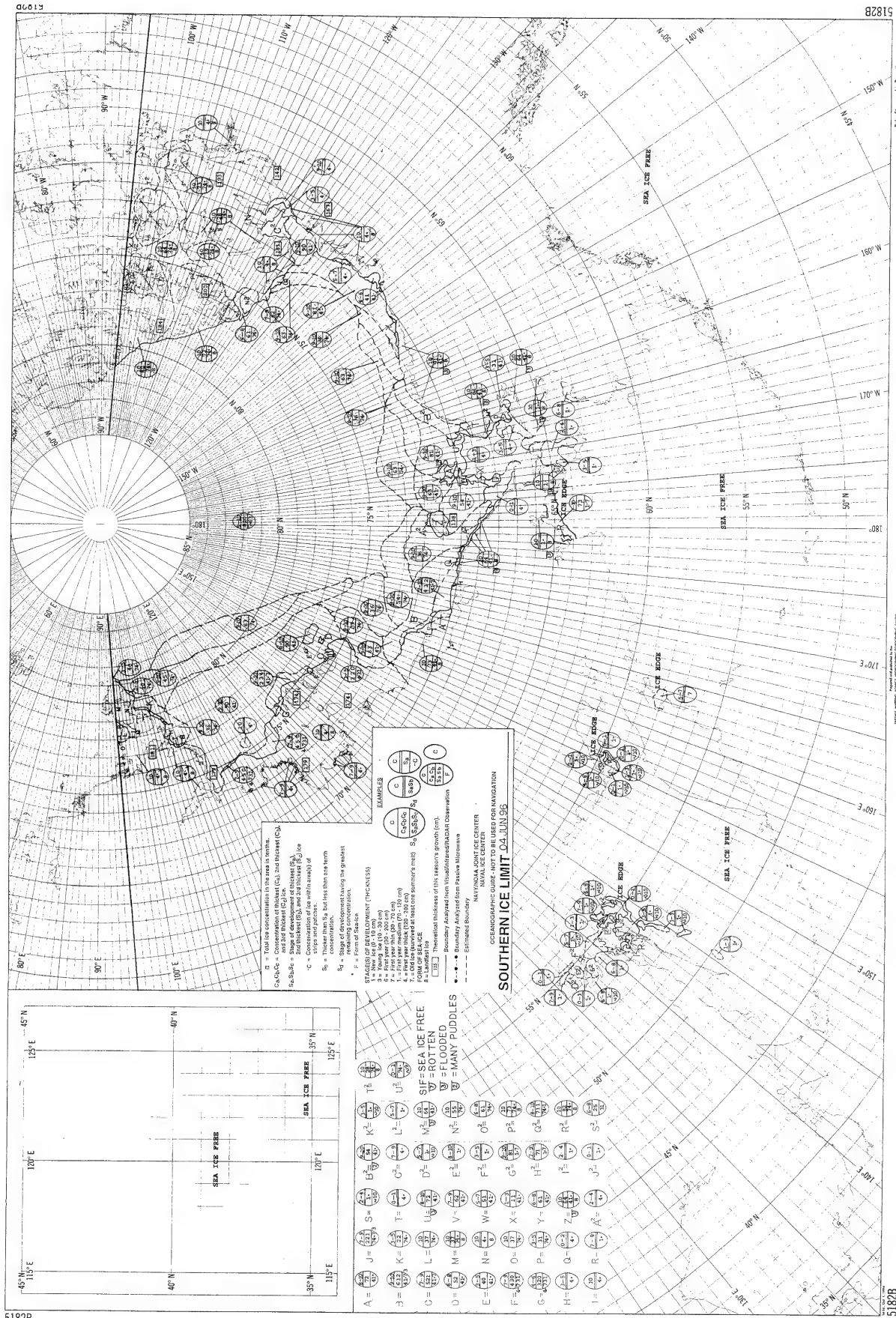




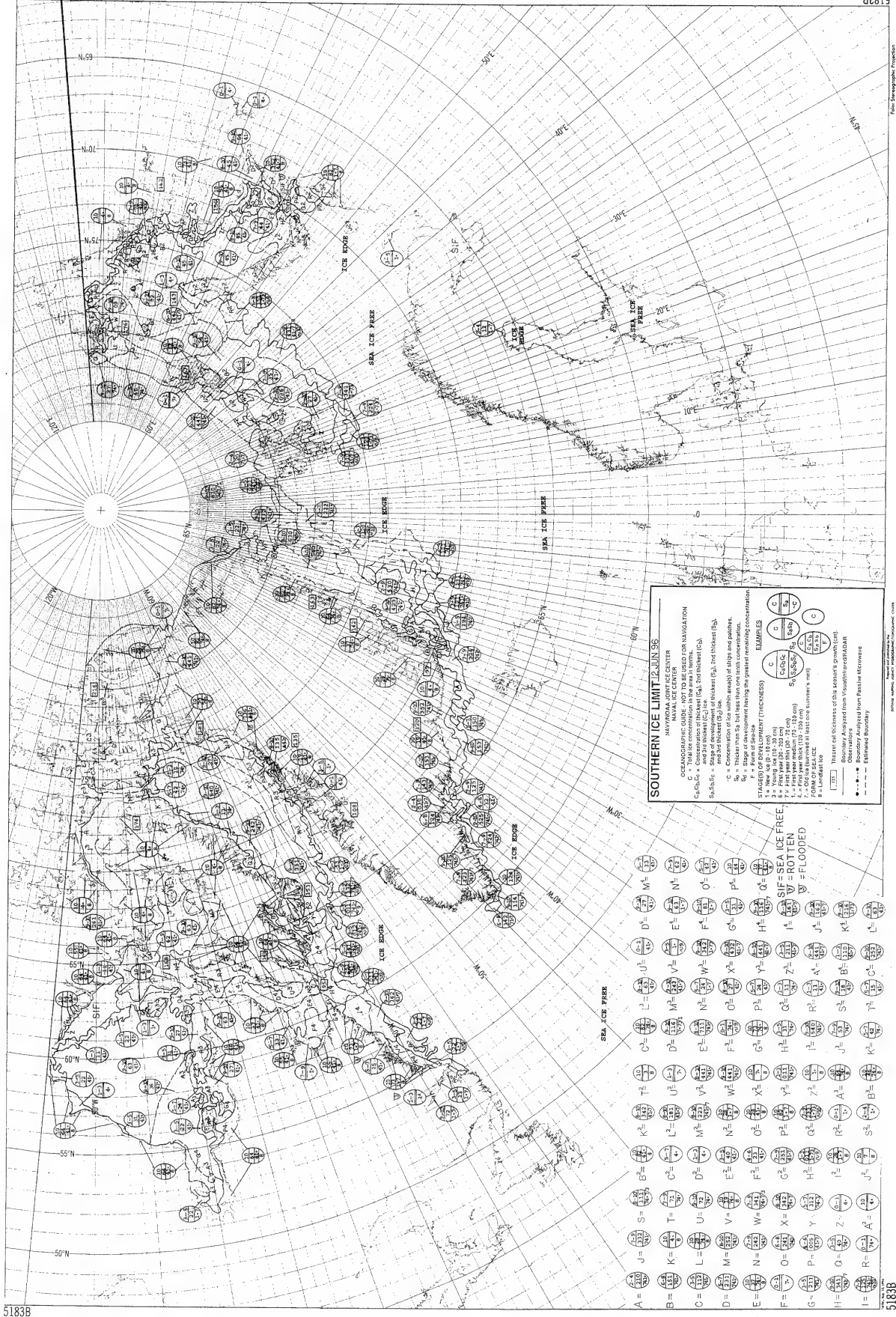


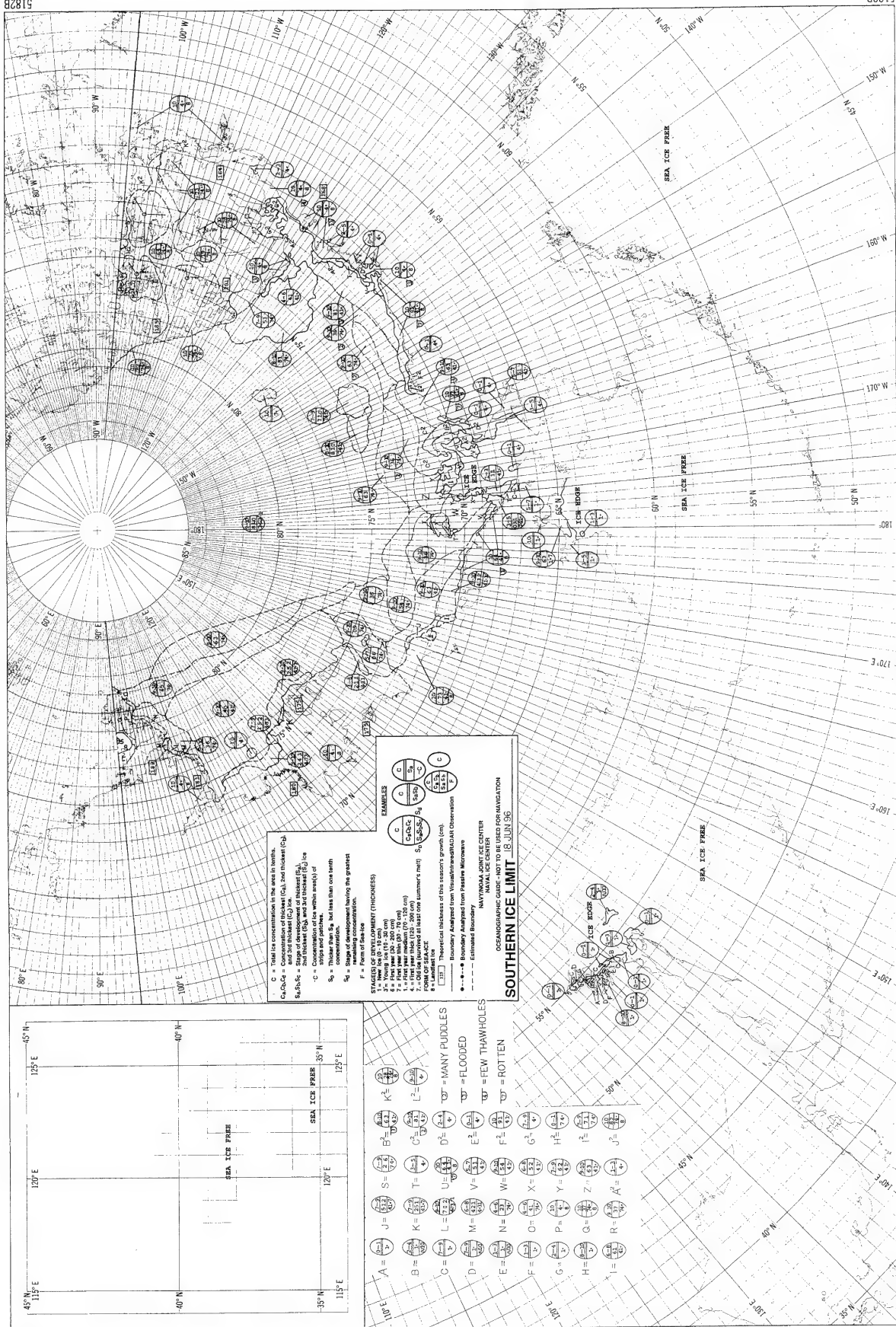


Map Symbols and Abbreviations
5183B



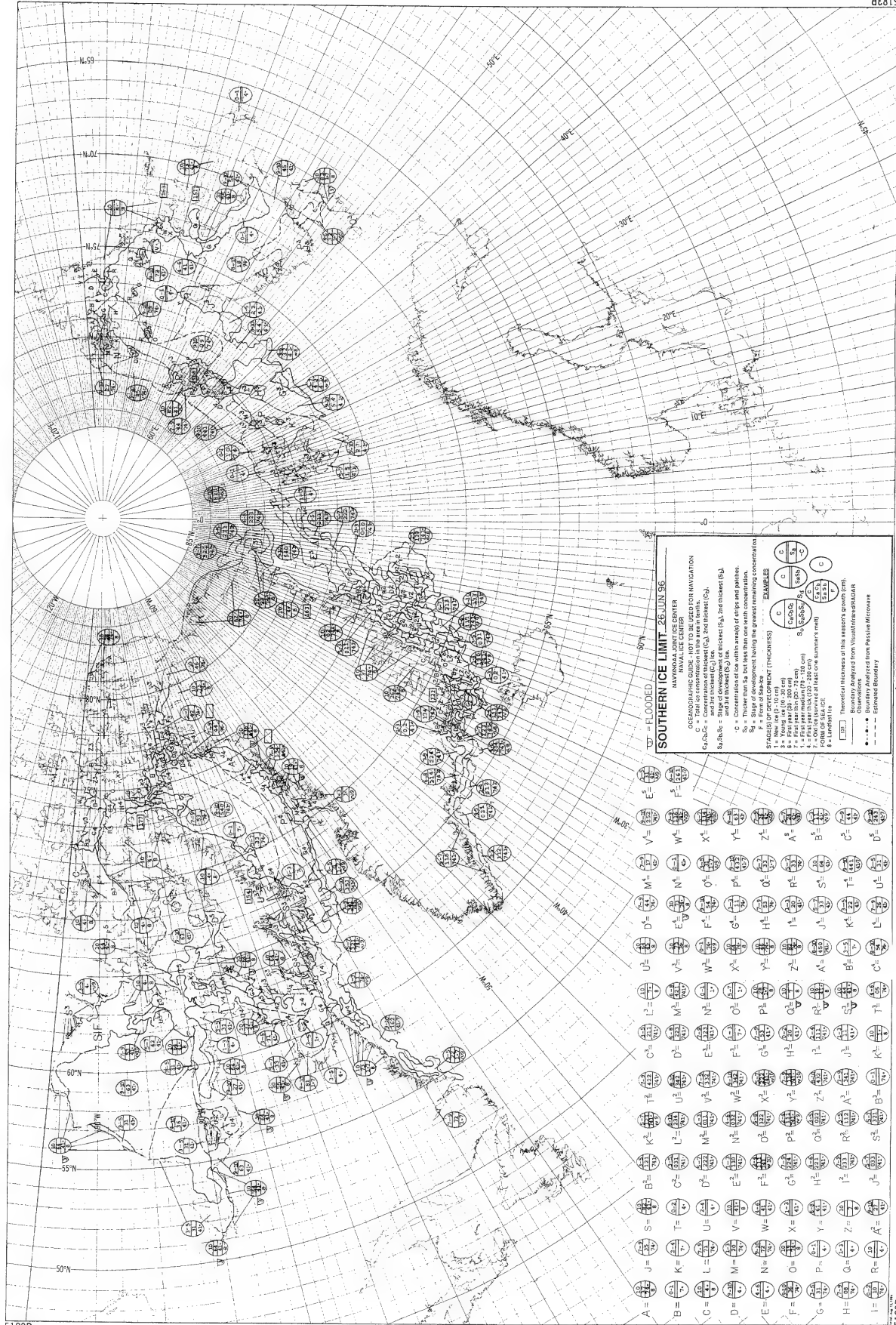




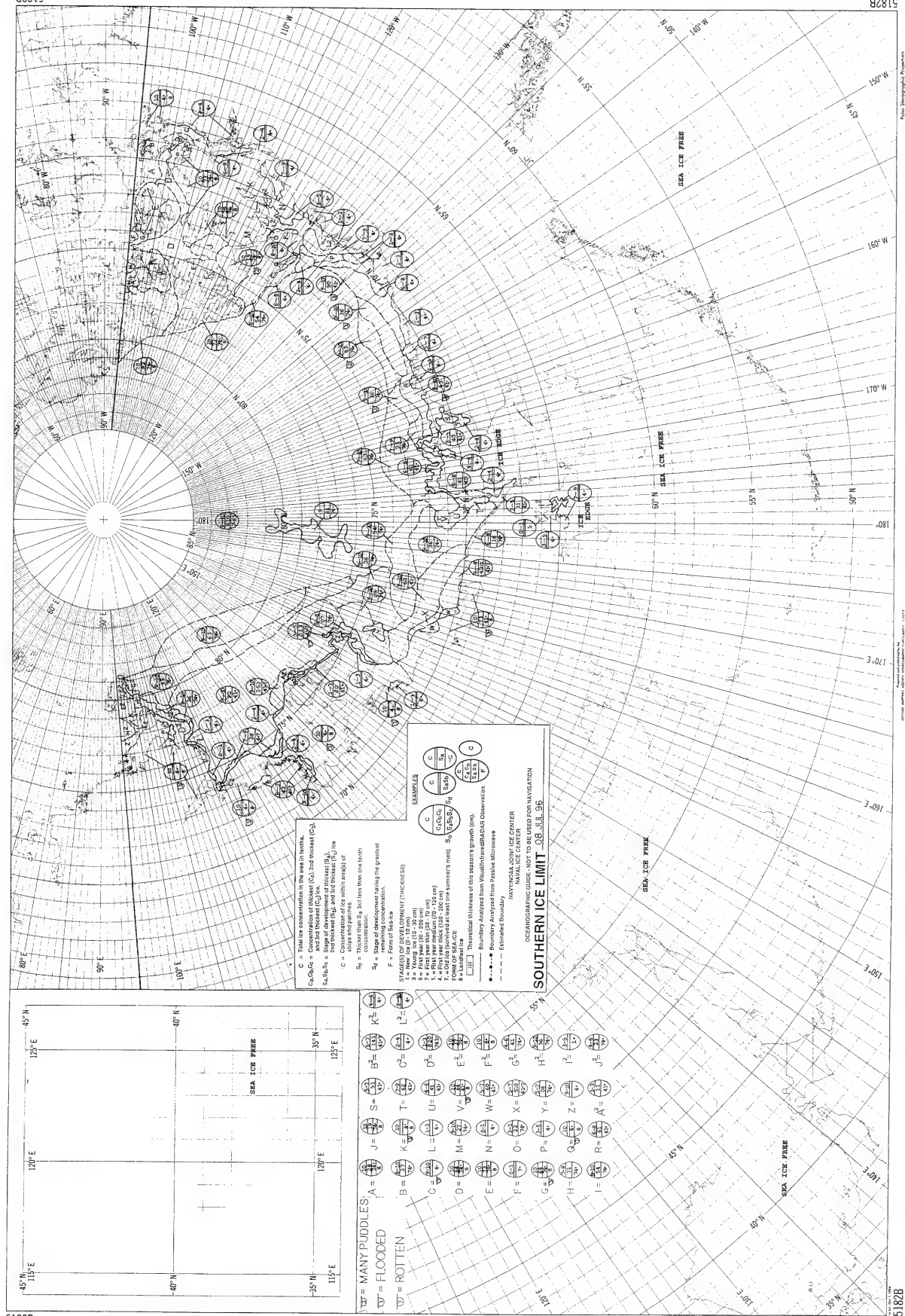










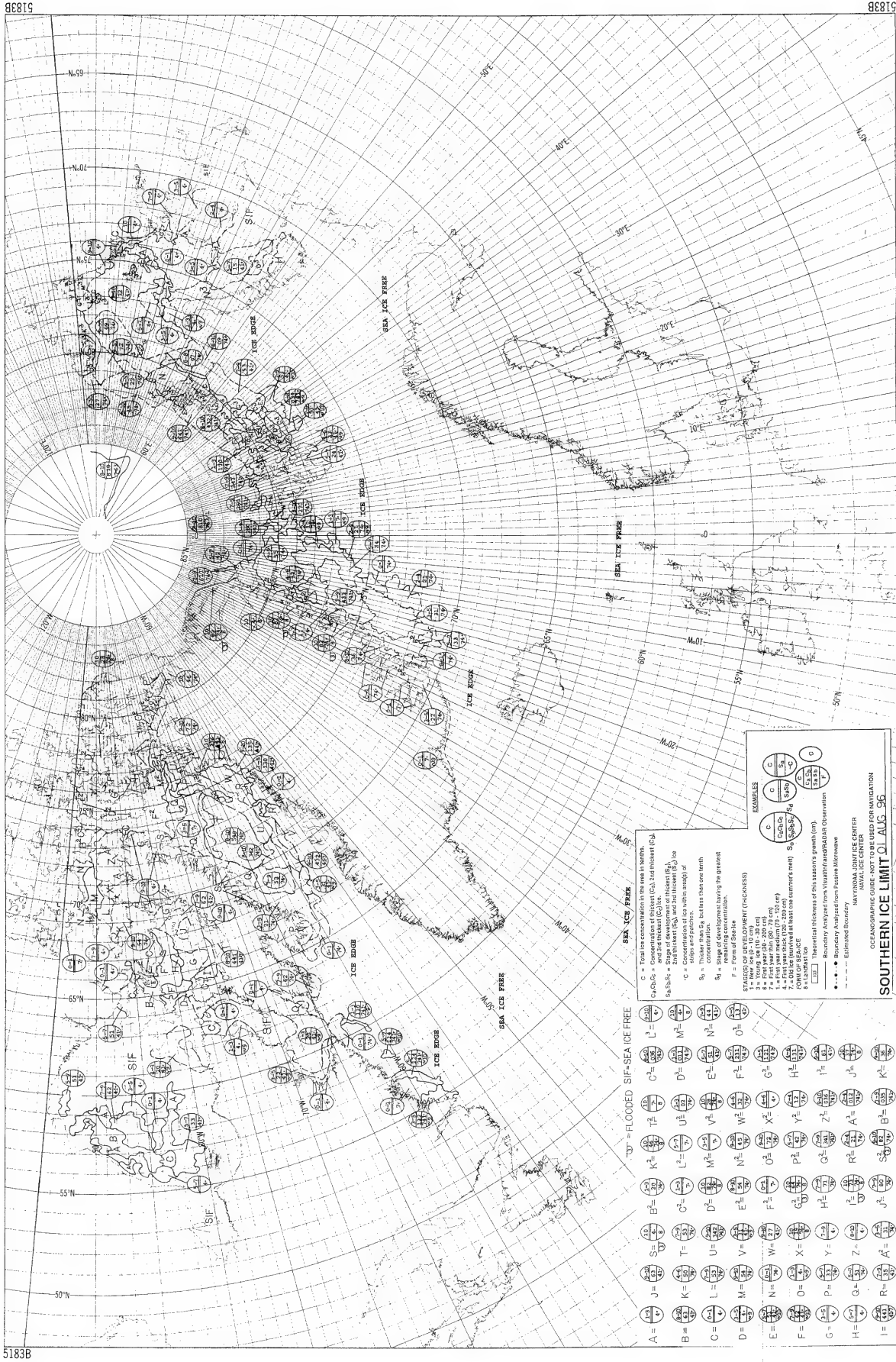








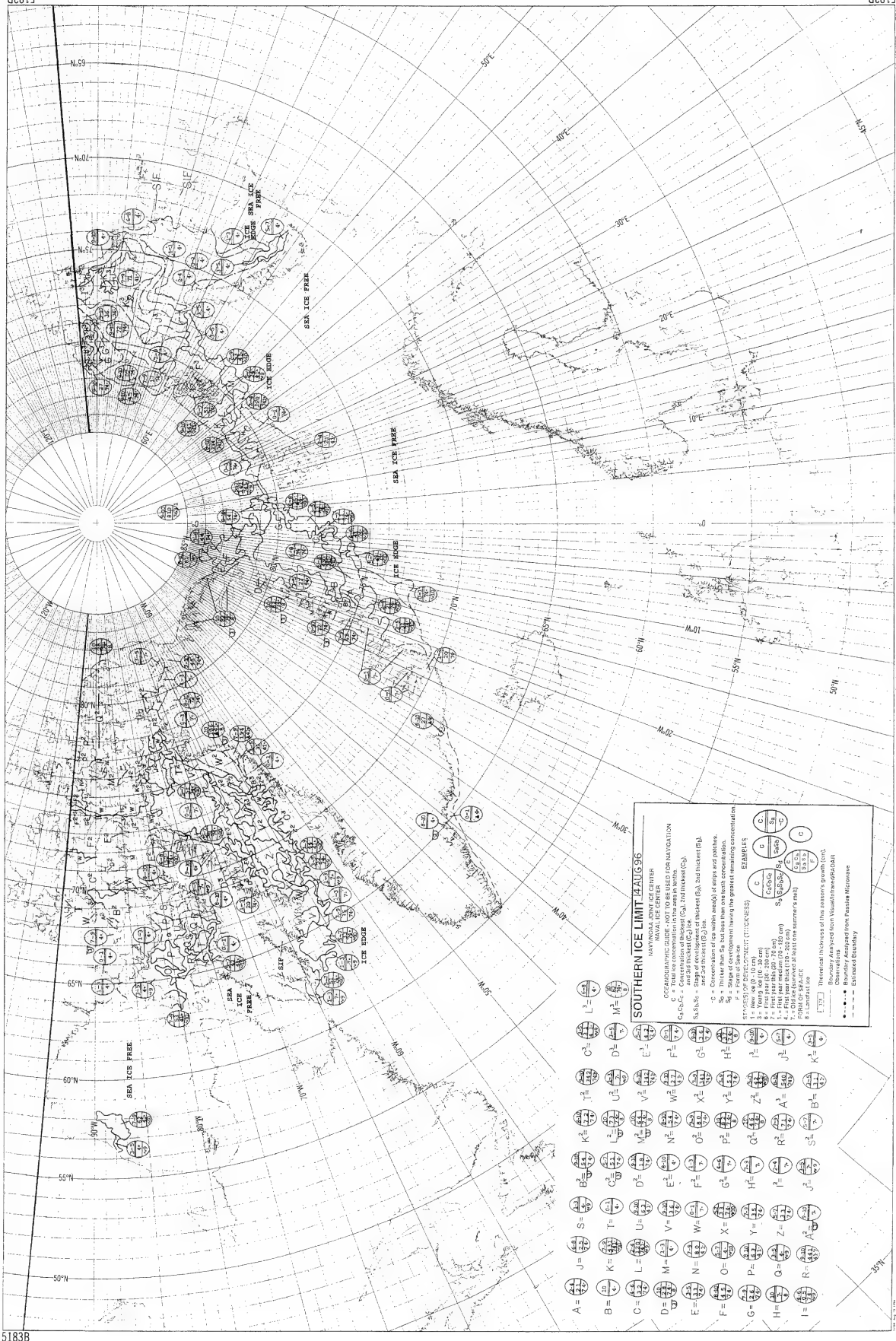




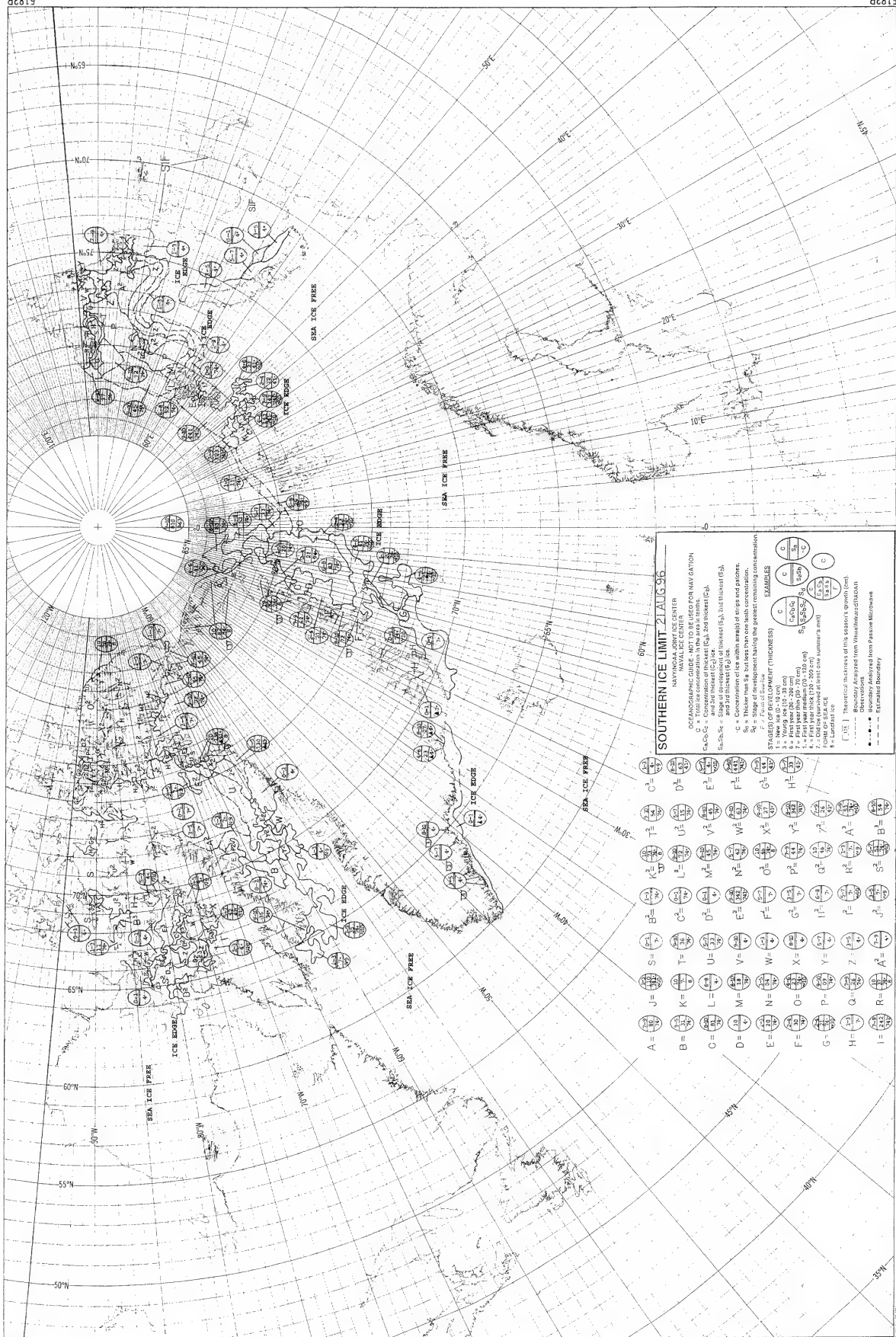












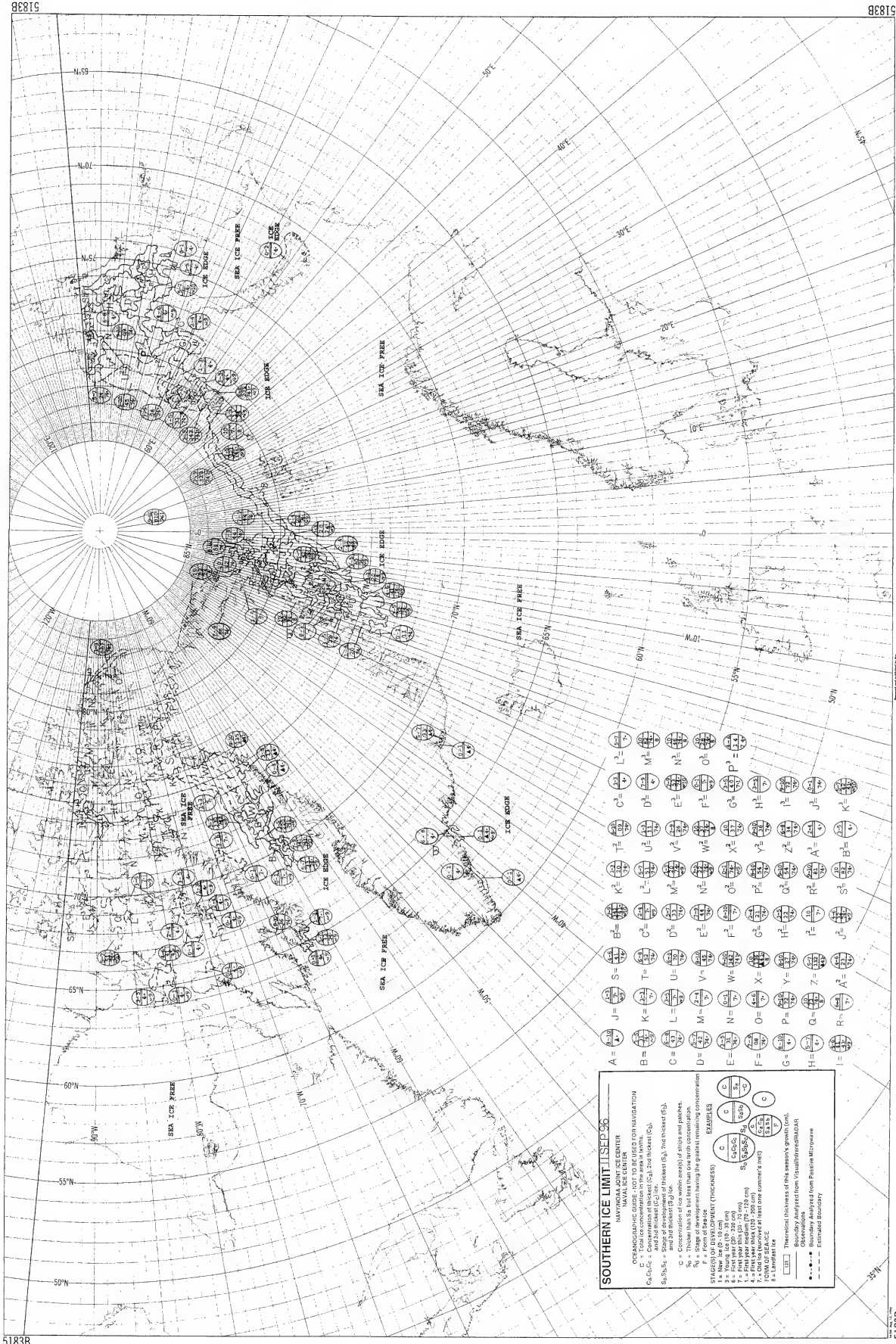
Refer to 1996 Special Arctic
Supplement for this Chart



**Refer to 1996 Special Arctic
Supplement for this Chart**



**Refer to 1996 Special Arctic
Supplement for this Chart**



SOUTHERN ICE LIMIT (SIL) SEP 56
NAVY/NOAA JOINT ICE CENTER
NAVAL ICE CENTER

LEGEND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of ice in the area in tenths.
C₁, C₂, C₃ = Concentration of ice in the area in tenths.
C₁, C₂, C₃ = Concentration of ice in the area in tenths.
C₁, C₂, C₃ = Concentration of ice in the area in tenths.

STAGES OF DEVELOPMENT (THICKNESS)

1 = Stage of development having the greatest remaining concentration.
2 = Stage of development having the second greatest remaining concentration.
3 = Stage of development having the third greatest remaining concentration.
4 = Stage of development having the fourth greatest remaining concentration.
5 = Stage of development having the fifth greatest remaining concentration.
6 = Stage of development having the sixth greatest remaining concentration.
7 = Stage of development having the seventh greatest remaining concentration.
8 = Stage of development having the eighth greatest remaining concentration.

EXAMPLES

1. $\frac{C}{C_1 C_2 C_3}$
2. $\frac{C}{C_1 C_2 C_3}$
3. $\frac{C}{C_1 C_2 C_3}$
4. $\frac{C}{C_1 C_2 C_3}$
5. $\frac{C}{C_1 C_2 C_3}$
6. $\frac{C}{C_1 C_2 C_3}$
7. $\frac{C}{C_1 C_2 C_3}$
8. $\frac{C}{C_1 C_2 C_3}$

BOUNDARY ANALYSIS

Boundary Analyzed from Visual and Radar
Boundary Analyzed from Radar Microzone
Estimated Boundary

**Refer to 1996 Special Arctic
Supplement for this Chart**

Refer to 1996 Special Arctic
Supplement for this Chart



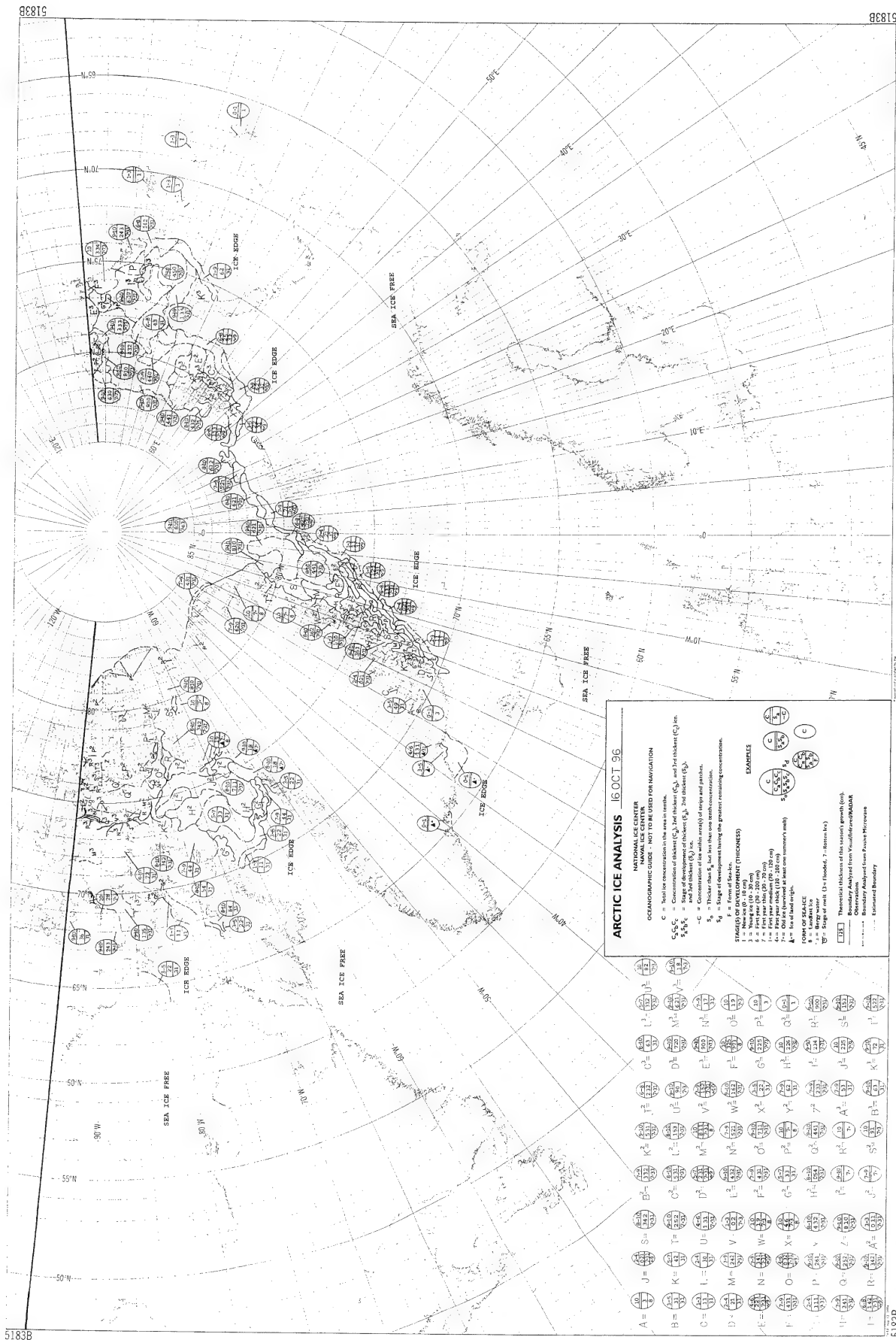
Refer to 1996 Special Arctic
Supplement for this Chart



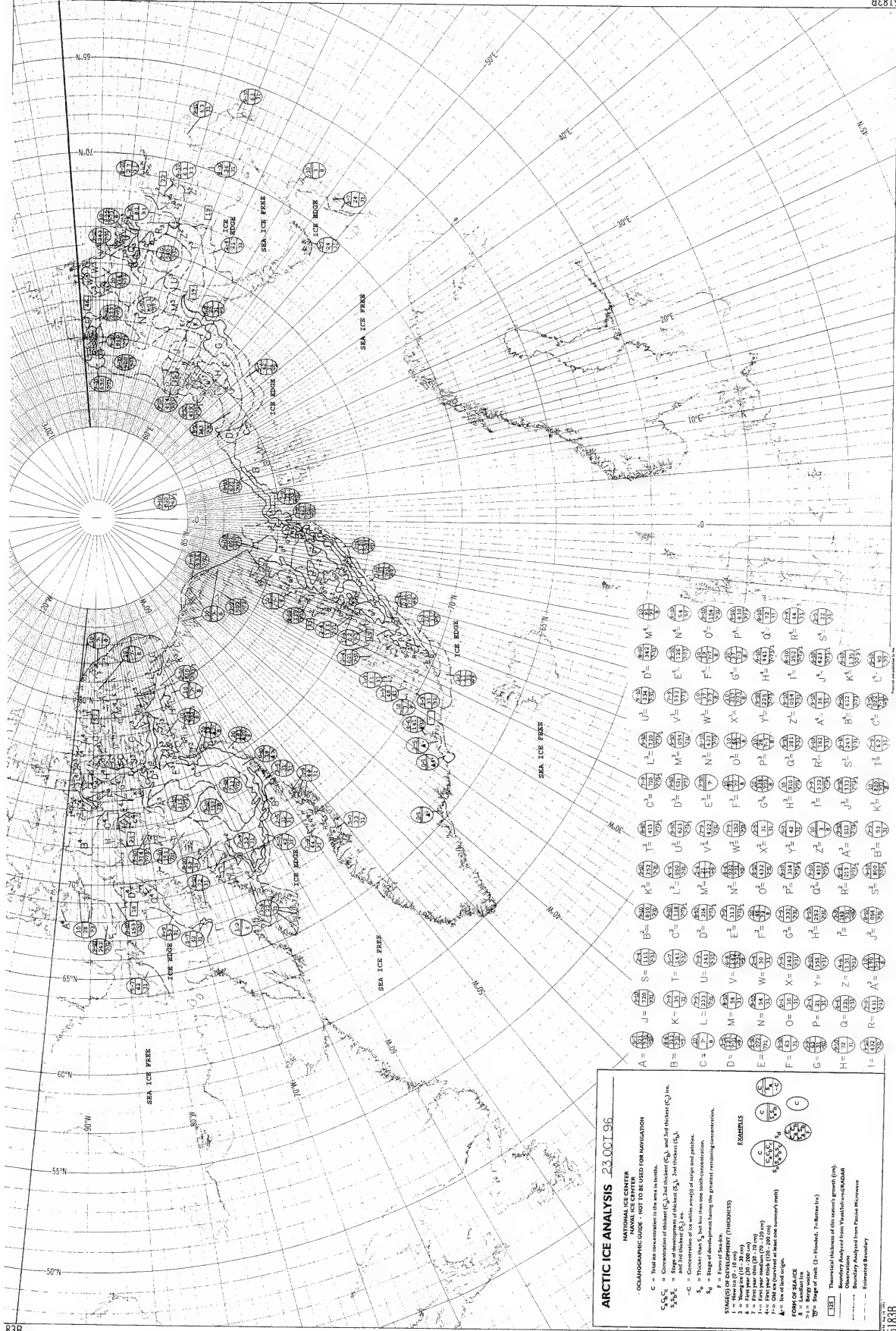
Refer to 1996 Special Arctic
Supplement for this Chart



**Refer to 1996 Special Arctic
Supplement for this Chart**



Refer to 1996 Special Arctic
Supplement for this Chart



ARCTIC ICE ANALYSIS 23 OCT 96

NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

SYMBOLS:
C = Ice concentration in the area in tenths.
S₁S₂C = Stage of development of ice (S₁, S₂, and S₃) and ice thickness (C) in feet.
S₁S₂C₁C₂ = Stage of development of ice (S₁, S₂, and S₃) and ice thickness (C₁, C₂) in feet.
-C = Ice thickness in feet.
S₁ = Thicker than S₂, but thinner than S₃.
S₂ = Stage of development having the greatest remaining concentration.
P = Form of ice.
EXAMPLES:
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 20 cm)
3 = First year ice (20 - 70 cm)
4 = First year ice (70 - 100 cm)
5 = First year ice (100 - 150 cm)
6 = First year ice (150 - 200 cm)
A = Ice of last origin.

FORM OF ICE:
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 20 cm)
3 = First year ice (20 - 70 cm)
4 = First year ice (70 - 100 cm)
5 = First year ice (100 - 150 cm)
6 = First year ice (150 - 200 cm)

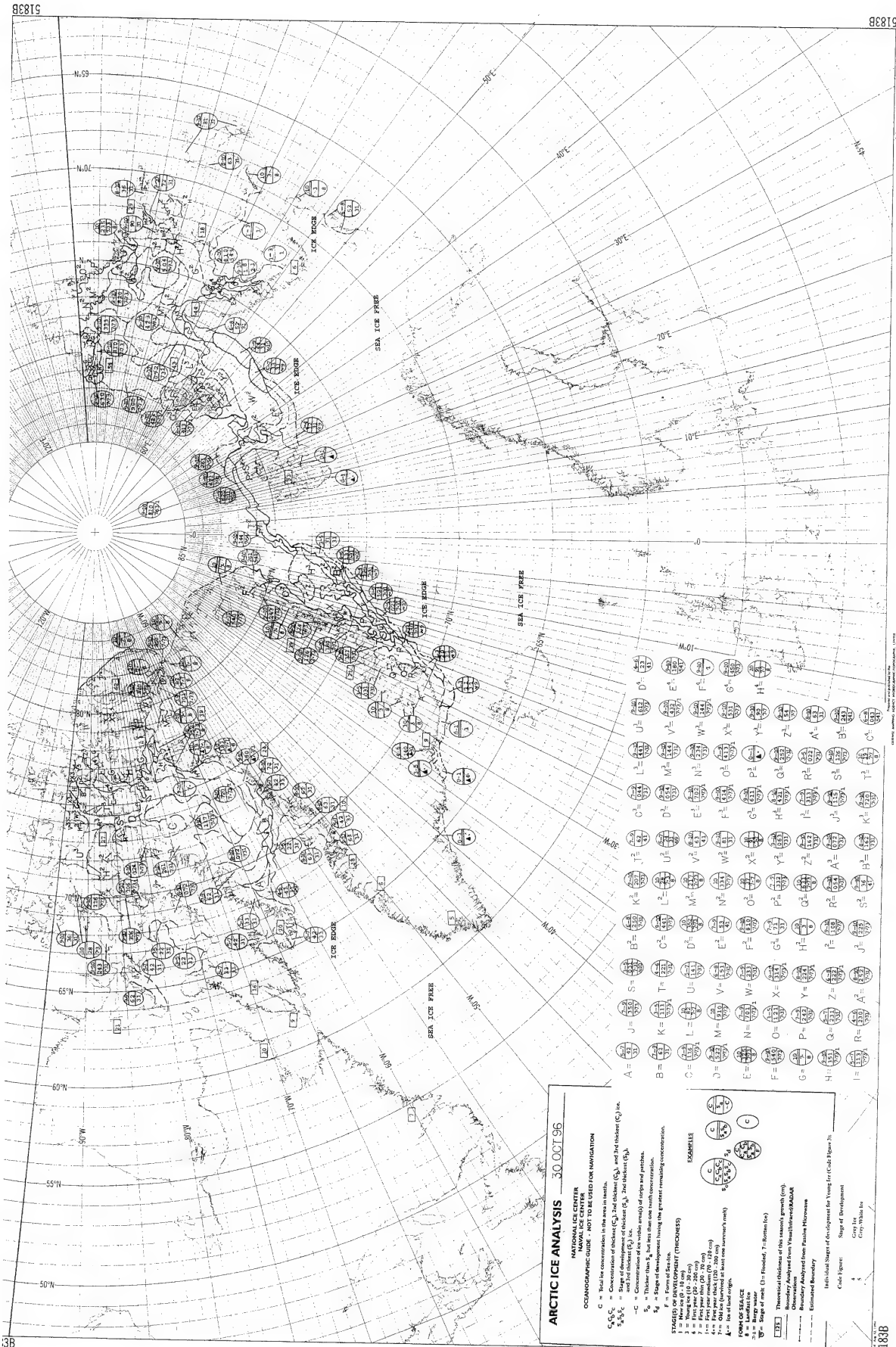
ICE BORD:
1 = Ice of last origin.
2 = Ice of last origin.
3 = Ice of last origin.
4 = Ice of last origin.
5 = Ice of last origin.
6 = Ice of last origin.

ICE FREE:
1 = Ice of last origin.
2 = Ice of last origin.
3 = Ice of last origin.
4 = Ice of last origin.
5 = Ice of last origin.
6 = Ice of last origin.

ICE BORD:
1 = Ice of last origin.
2 = Ice of last origin.
3 = Ice of last origin.
4 = Ice of last origin.
5 = Ice of last origin.
6 = Ice of last origin.

ICE FREE:
1 = Ice of last origin.
2 = Ice of last origin.
3 = Ice of last origin.
4 = Ice of last origin.
5 = Ice of last origin.
6 = Ice of last origin.

**Refer to 1996 Special Arctic
Supplement for this Chart**



ARCTIC ICE ANALYSIS 30 OCT 96

NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

G = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickets (C₁), 2nd thicket (C₂), and 3rd thicket (C₃) in tenths.
S₁, S₂, S₃ = Stages of development of thickets (S₁), 2nd thicket (S₂), and 3rd thicket (S₃) in tenths.
C = Concentration of the within area(s) of single and patches.
S = Stage of development of the within area(s) of single and patches.
F = Form of ice edge.
E = Stage of development of the greater remaining concentration.

FORM OF DEVELOPMENT (THICKNESS)
1 = Young ice (10-30 cm)
2 = Young ice (30-50 cm)
3 = First year thin (50-70 cm)
4 = First year thin (70-90 cm)
5 = First year thin (90-110 cm)
6 = First year thin (110-130 cm)
7 = First year thin (130-150 cm)
8 = First year thin (150-170 cm)
9 = First year thin (170-190 cm)
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

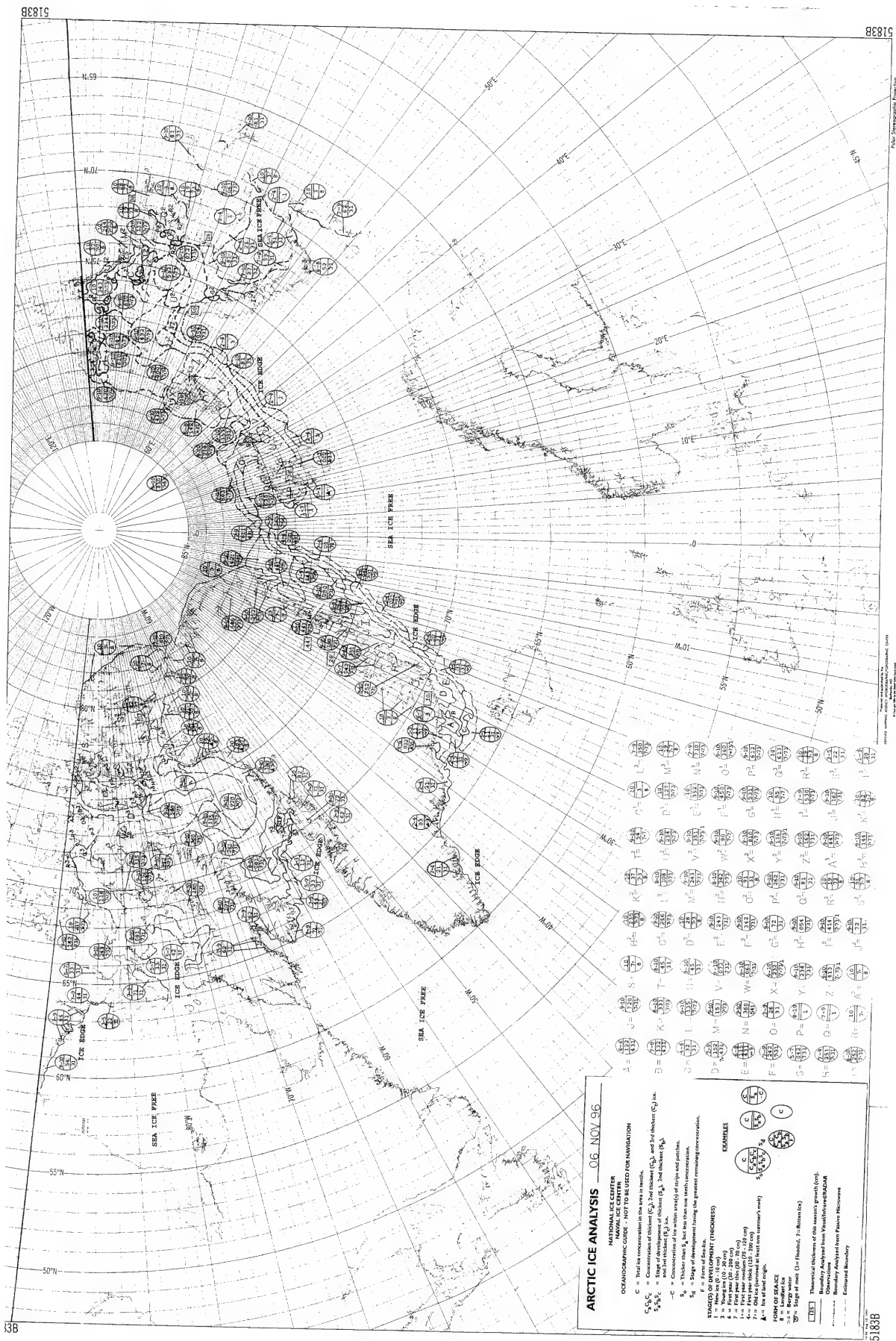
FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

FORM OF SEA ICE
1 = Landfast ice
2 = Landfast ice
3 = Landfast ice
4 = Landfast ice
5 = Landfast ice
6 = Landfast ice
7 = Landfast ice
8 = Landfast ice
9 = Landfast ice
A = Ice of last summer.

Refer to 1996 Special Arctic
Supplement for this Chart



ARCTIC ICE ANALYSIS 06 NOV 96

NATIONAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in percent.
C₁, C₂, C₃ = Concentrations of thickens (C₁) 1st thickens (C₂), and 3rd thickens (C₃) in percent.
S₁, S₂, S₃ = Percentages of thickens (S₁) 1st thickens (S₂), and 3rd thickens (S₃) in percent.
-C = Concentration of ice within area(s) of strip and patch.
S₀ = Thicker than S₁ but less than one sixth concentration.
S₀ = Stage of development along the greatest remaining concentration.

STAGES OF DEVELOPMENT (THICKNESS)

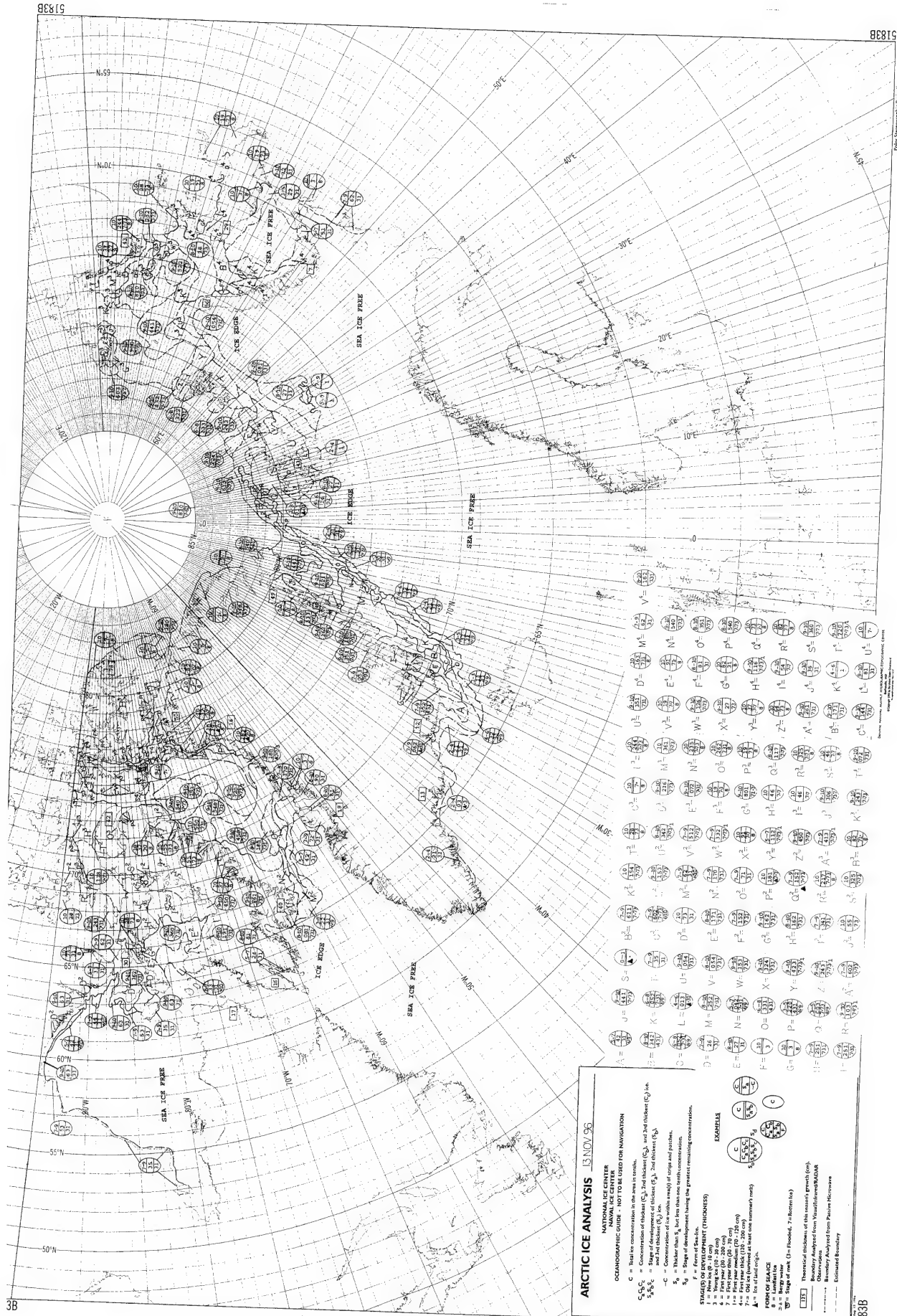
1 = New ice (0-20 cm)
2 = Young ice (20-40 cm)
3 = First year ice (40-100 cm)
4 = Second year ice (100-150 cm)
5 = Third year ice (150-200 cm)
6 = Old ice (200-300 cm)
7 = Ice of undetermined age
8 = Ice of undetermined age
9 = Ice of undetermined age
10 = Ice of undetermined age

EXAMPLES

C = $\frac{100}{100} = 1.0$
C₁ = $\frac{100}{100} = 1.0$
C₂ = $\frac{100}{100} = 1.0$
C₃ = $\frac{100}{100} = 1.0$
S₁ = $\frac{100}{100} = 1.0$
S₂ = $\frac{100}{100} = 1.0$
S₃ = $\frac{100}{100} = 1.0$

Legend:
 [Symbol] = Theoretical thickness of the season's growth (cm).
 [Symbol] = Maximum thickness from satellite altimetry.
 [Symbol] = Maximum thickness from altimetry.
 [Symbol] = Maximum thickness from altimetry.

Refer to 1996 Special Arctic
Supplement for this Chart



ARCTIC ICE ANALYSIS 13 NOV 95

**NATIONAL ICE CENTER
NAVAL ICE CENTER - NOT TO BE USED FOR NAVIGATION**

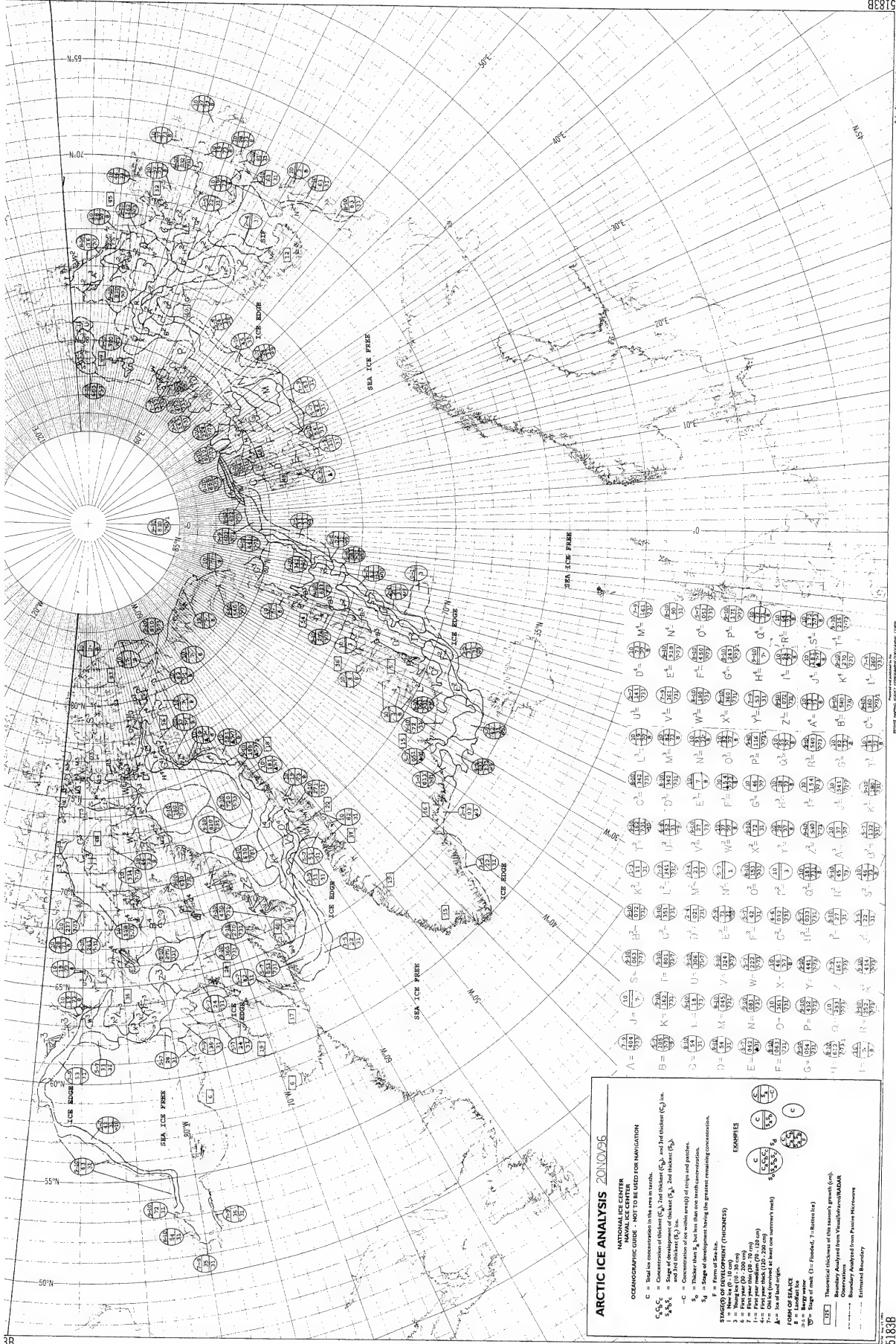
OSCAROGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

CONCENTRATION
 C = Total ice concentration in the area in tenths.
 C₁ C₂ C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 C₁ C₂ C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 C₁ C₂ C₃ = Concentration of ice within range of 100 and 200 meters.

THICKNESS
 S₁ = Thicker than S₂, but less than one tenth concentration.
 S₂ = Stage of development having the greatest remaining concentration.

STAGES OF DEVELOPMENT (THICKNESS)
 1 = New ice (0 - 10 cm)
 2 = First year (10 - 200 cm)
 3 = First year (200 - 250 cm)
 4 = First year (250 - 300 cm)
 5 = First year (300 - 350 cm)
 6 = First year (350 - 400 cm)
 7 = Old ice (400 - 450 cm)
 8 = Old ice (450 - 500 cm)
 9 = Old ice (500 - 550 cm)
 10 = Old ice (550 - 600 cm)
 11 = Old ice (600 - 650 cm)
 12 = Old ice (650 - 700 cm)
 13 = Old ice (700 - 750 cm)
 14 = Old ice (750 - 800 cm)
 15 = Old ice (800 - 850 cm)
 16 = Old ice (850 - 900 cm)
 17 = Old ice (900 - 950 cm)
 18 = Old ice (950 - 1000 cm)
 19 = Old ice (1000 - 1050 cm)
 20 = Old ice (1050 - 1100 cm)
 21 = Old ice (1100 - 1150 cm)
 22 = Old ice (1150 - 1200 cm)
 23 = Old ice (1200 - 1250 cm)
 24 = Old ice (1250 - 1300 cm)
 25 = Old ice (1300 - 1350 cm)
 26 = Old ice (1350 - 1400 cm)
 27 = Old ice (1400 - 1450 cm)
 28 = Old ice (1450 - 1500 cm)
 29 = Old ice (1500 - 1550 cm)
 30 = Old ice (1550 - 1600 cm)
 31 = Old ice (1600 - 1650 cm)
 32 = Old ice (1650 - 1700 cm)
 33 = Old ice (1700 - 1750 cm)
 34 = Old ice (1750 - 1800 cm)
 35 = Old ice (1800 - 1850 cm)
 36 = Old ice (1850 - 1900 cm)
 37 = Old ice (1900 - 1950 cm)
 38 = Old ice (1950 - 2000 cm)
 39 = Old ice (2000 - 2050 cm)
 40 = Old ice (2050 - 2100 cm)
 41 = Old ice (2100 - 2150 cm)
 42 = Old ice (2150 - 2200 cm)
 43 = Old ice (2200 - 2250 cm)
 44 = Old ice (2250 - 2300 cm)
 45 = Old ice (2300 - 2350 cm)
 46 = Old ice (2350 - 2400 cm)
 47 = Old ice (2400 - 2450 cm)
 48 = Old ice (2450 - 2500 cm)
 49 = Old ice (2500 - 2550 cm)
 50 = Old ice (2550 - 2600 cm)
 51 = Old ice (2600 - 2650 cm)
 52 = Old ice (2650 - 2700 cm)
 53 = Old ice (2700 - 2750 cm)
 54 = Old ice (2750 - 2800 cm)
 55 = Old ice (2800 - 2850 cm)
 56 = Old ice (2850 - 2900 cm)
 57 = Old ice (2900 - 2950 cm)
 58 = Old ice (2950 - 3000 cm)
 59 = Old ice (3000 - 3050 cm)
 60 = Old ice (3050 - 3100 cm)
 61 = Old ice (3100 - 3150 cm)
 62 = Old ice (3150 - 3200 cm)
 63 = Old ice (3200 - 3250 cm)
 64 = Old ice (3250 - 3300 cm)
 65 = Old ice (3300 - 3350 cm)
 66 = Old ice (3350 - 3400 cm)
 67 = Old ice (3400 - 3450 cm)
 68 = Old ice (3450 - 3500 cm)
 69 = Old ice (3500 - 3550 cm)
 70 = Old ice (3550 - 3600 cm)
 71 = Old ice (3600 - 3650 cm)
 72 = Old ice (3650 - 3700 cm)
 73 = Old ice (3700 - 3750 cm)
 74 = Old ice (3750 - 3800 cm)
 75 = Old ice (3800 - 3850 cm)
 76 = Old ice (3850 - 3900 cm)
 77 = Old ice (3900 - 3950 cm)
 78 = Old ice (3950 - 4000 cm)
 79 = Old ice (4000 - 4050 cm)
 80 = Old ice (4050 - 4100 cm)
 81 = Old ice (4100 - 4150 cm)
 82 = Old ice (4150 - 4200 cm)
 83 = Old ice (4200 - 4250 cm)
 84 = Old ice (4250 - 4300 cm)
 85 = Old ice (4300 - 4350 cm)
 86 = Old ice (4350 - 4400 cm)
 87 = Old ice (4400 - 4450 cm)
 88 = Old ice (4450 - 4500 cm)
 89 = Old ice (4500 - 4550 cm)
 90 = Old ice (4550 - 4600 cm)
 91 = Old ice (4600 - 4650 cm)
 92 = Old ice (4650 - 4700 cm)
 93 = Old ice (4700 - 4750 cm)
 94 = Old ice (4750 - 4800 cm)
 95 = Old ice (4800 - 4850 cm)
 96 = Old ice (4850 - 4900 cm)
 97 = Old ice (4900 - 4950 cm)
 98 = Old ice (4950 - 5000 cm)
 99 = Old ice (5000 - 5050 cm)
 100 = Old ice (5050 - 5100 cm)
 101 = Old ice (5100 - 5150 cm)
 102 = Old ice (5150 - 5200 cm)
 103 = Old ice (5200 - 5250 cm)
 104 = Old ice (5250 - 5300 cm)
 105 = Old ice (5300 - 5350 cm)
 106 = Old ice (5350 - 5400 cm)
 107 = Old ice (5400 - 5450 cm)
 108 = Old ice (5450 - 5500 cm)
 109 = Old ice (5500 - 5550 cm)
 110 = Old ice (5550 - 5600 cm)
 111 = Old ice (5600 - 5650 cm)
 112 = Old ice (5650 - 5700 cm)
 113 = Old ice (5700 - 5750 cm)
 114 = Old ice (5750 - 5800 cm)
 115 = Old ice (5800 - 5850 cm)
 116 = Old ice (5850 - 5900 cm)
 117 = Old ice (5900 - 5950 cm)
 118 = Old ice (5950 - 6000 cm)
 119 = Old ice (6000 - 6050 cm)
 120 = Old ice (6050 - 6100 cm)
 121 = Old ice (6100 - 6150 cm)
 122 = Old ice (6150 - 6200 cm)
 123 = Old ice (6200 - 6250 cm)
 124 = Old ice (6250 - 6300 cm)
 125 = Old ice (6300 - 6350 cm)
 126 = Old ice (6350 - 6400 cm)
 127 = Old ice (6400 - 6450 cm)
 128 = Old ice (6450 - 6500 cm)
 129 = Old ice (6500 - 6550 cm)
 130 = Old ice (6550 - 6600 cm)
 131 = Old ice (6600 - 6650 cm)
 132 = Old ice (6650 - 6700 cm)
 133 = Old ice (6700 - 6750 cm)
 134 = Old ice (6750 - 6800 cm)
 135 = Old ice (6800 - 6850 cm)
 136 = Old ice (6850 - 6900 cm)
 137 = Old ice (6900 - 6950 cm)
 138 = Old ice (6950 - 7000 cm)
 139 = Old ice (7000 - 7050 cm)
 140 = Old ice (7050 - 7100 cm)
 141 = Old ice (7100 - 7150 cm)
 142 = Old ice (7150 - 7200 cm)
 143 = Old ice (7200 - 7250 cm)
 144 = Old ice (7250 - 7300 cm)
 145 = Old ice (7300 - 7350 cm)
 146 = Old ice (7350 - 7400 cm)
 147 = Old ice (7400 - 7450 cm)
 148 = Old ice (7450 - 7500 cm)
 149 = Old ice (7500 - 7550 cm)
 150 = Old ice (7550 - 7600 cm)
 151 = Old ice (7600 - 7650 cm)
 152 = Old ice (7650 - 7700 cm)
 153 = Old ice (7700 - 7750 cm)
 154 = Old ice (7750 - 7800 cm)
 155 = Old ice (7800 - 7850 cm)
 156 = Old ice (7850 - 7900 cm)
 157 = Old ice (7900 - 7950 cm)
 158 = Old ice (7950 - 8000 cm)
 159 = Old ice (8000 - 8050 cm)
 160 = Old ice (8050 - 8100 cm)
 161 = Old ice (8100 - 8150 cm)
 162 = Old ice (8150 - 8200 cm)
 163 = Old ice (8200 - 8250 cm)
 164 = Old ice (8250 - 8300 cm)
 165 = Old ice (8300 - 8350 cm)
 166 = Old ice (8350 - 8400 cm)
 167 = Old ice (8400 - 8450 cm)
 168 = Old ice (8450 - 8500 cm)
 169 = Old ice (8500 - 8550 cm)
 170 = Old ice (8550 - 8600 cm)
 171 = Old ice (8600 - 8650 cm)
 172 = Old ice (8650 - 8700 cm)
 173 = Old ice (8700 - 8750 cm)
 174 = Old ice (8750 - 8800 cm)
 175 = Old ice (8800 - 8850 cm)
 176 = Old ice (8850 - 8900 cm)
 177 = Old ice (8900 - 8950 cm)
 178 = Old ice (8950 - 9000 cm)
 179 = Old ice (9000 - 9050 cm)
 180 = Old ice (9050 - 9100 cm)
 181 = Old ice (9100 - 9150 cm)
 182 = Old ice (9150 - 9200 cm)
 183 = Old ice (9200 - 9250 cm)
 184 = Old ice (9250 - 9300 cm)
 185 = Old ice (9300 - 9350 cm)
 186 = Old ice (9350 - 9400 cm)
 187 = Old ice (9400 - 9450 cm)
 188 = Old ice (9450 - 9500 cm)
 189 = Old ice (9500 - 9550 cm)
 190 = Old ice (9550 - 9600 cm)
 191 = Old ice (9600 - 9650 cm)
 192 = Old ice (9650 - 9700 cm)
 193 = Old ice (9700 - 9750 cm)
 194 = Old ice (9750 - 9800 cm)
 195 = Old ice (9800 - 9850 cm)
 196 = Old ice (9850 - 9900 cm)
 197 = Old ice (9900 - 9950 cm)
 198 = Old ice (9950 - 10000 cm)
 199 = Old ice (10000 - 10050 cm)
 200 = Old ice (10050 - 10100 cm)
 201 = Old ice (10100 - 10150 cm)
 202 = Old ice (10150 - 10200 cm)
 203 = Old ice (10200 - 10250 cm)
 204 = Old ice (10250 - 10300 cm)
 205 = Old ice (10300 - 10350 cm)
 206 = Old ice (10350 - 10400 cm)
 207 = Old ice (10400 - 10450 cm)
 208 = Old ice (10450 - 10500 cm)
 209 = Old ice (10500 - 10550 cm)
 210 = Old ice (10550 - 10600 cm)
 211 = Old ice (10600 - 10650 cm)
 212 = Old ice (10650 - 10700 cm)
 213 = Old ice (10700 - 10750 cm)
 214 = Old ice (10750 - 10800 cm)
 215 = Old ice (10800 - 10850 cm)
 216 = Old ice (10850 - 10900 cm)
 217 = Old ice (10900 - 10950 cm)
 218 = Old ice (10950 - 11000 cm)
 219 = Old ice (11000 - 11050 cm)
 220 = Old ice (11050 - 11100 cm)
 221 = Old ice (11100 - 11150 cm)
 222 = Old ice (11150 - 11200 cm)
 223 = Old ice (11200 - 11250 cm)
 224 = Old ice (11250 - 11300 cm)
 225 = Old ice (11300 - 11350 cm)
 226 = Old ice (11350 - 11400 cm)
 227 = Old ice (11400 - 11450 cm)
 228 = Old ice (11450 - 11500 cm)
 229 = Old ice (11500 - 11550 cm)
 230 = Old ice (11550 - 11600 cm)
 231 = Old ice (11600 - 11650 cm)
 232 = Old ice (11650 - 11700 cm)
 233 = Old ice (11700 - 11750 cm)
 234 = Old ice (11750 - 11800 cm)
 235 = Old ice (11800 - 11850 cm)
 236 = Old ice (11850 - 11900 cm)
 237 = Old ice (11900 - 11950 cm)
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 350 = Old ice (17550 - 17600 cm)
 351 = Old ice (17600 - 17650 cm)
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 354 = Old ice (17750 - 17800 cm)
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 475 = Old ice (23800 - 23850 cm)
 476 = Old ice (23850 - 23900 cm)
 477 = Old ice (23900 -

**Refer to 1996 Special Arctic
Supplement for this Chart**



North Geographic Projection
Scale 1:1,000,000

ARCTIC ICE ANALYSIS 20NOV95

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in units.

C₁C₂C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.

S₁S₂S₃ = Thickness of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.

-C = Concentration of ice within area(s) of crevasses and polynyas.

S₀ = Thicker than S₁, but less than one level concentration.

S₄ = Stage of development having the greatest remaining concentration.

S₅ = Ice of last origin.

STAGES OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 150 mm)
2 = First year (150 - 200 mm)
3 = Second year (200 - 250 mm)
4 = Third year (250 - 300 mm)
5 = Fourth year (300 - 350 mm)
6 = Fifth year (350 - 400 mm)
7 = Old ice (400 mm and over)

A = Ice of last origin.

STAGE OF SPACE

A = Area
B = Boundary
C = Crevasse
D = Drift
E = Edge
F = Frazil
G = Gull
H = Hole
I = Ice
J = Jet
K = Keel
L = Lead
M = Melt
N = Nodules
O = Open
P = Pressure
Q = Quagmire
R = Ridge
S = Sea
T = Trough
U = Under
V = Vortex
W = Wind
X = X-ray
Y = Yacht
Z = Zone

EXAMPLES

C = Total ice concentration in the area in units.

C₁C₂C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.

S₁S₂S₃ = Thickness of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.

-C = Concentration of ice within area(s) of crevasses and polynyas.

S₀ = Thicker than S₁, but less than one level concentration.

S₄ = Stage of development having the greatest remaining concentration.

S₅ = Ice of last origin.

STAGES OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 150 mm)
2 = First year (150 - 200 mm)
3 = Second year (200 - 250 mm)
4 = Third year (250 - 300 mm)
5 = Fourth year (300 - 350 mm)
6 = Fifth year (350 - 400 mm)
7 = Old ice (400 mm and over)

A = Ice of last origin.

STAGE OF SPACE

A = Area
B = Boundary
C = Crevasse
D = Drift
E = Edge
F = Frazil
G = Gull
H = Hole
I = Ice
J = Jet
K = Keel
L = Lead
M = Melt
N = Nodules
O = Open
P = Pressure
Q = Quagmire
R = Ridge
S = Sea
T = Trough
U = Under
V = Vortex
W = Wind
X = X-ray
Y = Yacht
Z = Zone

THEORETICAL THICKNESS OF ICE GROWTH (cm)

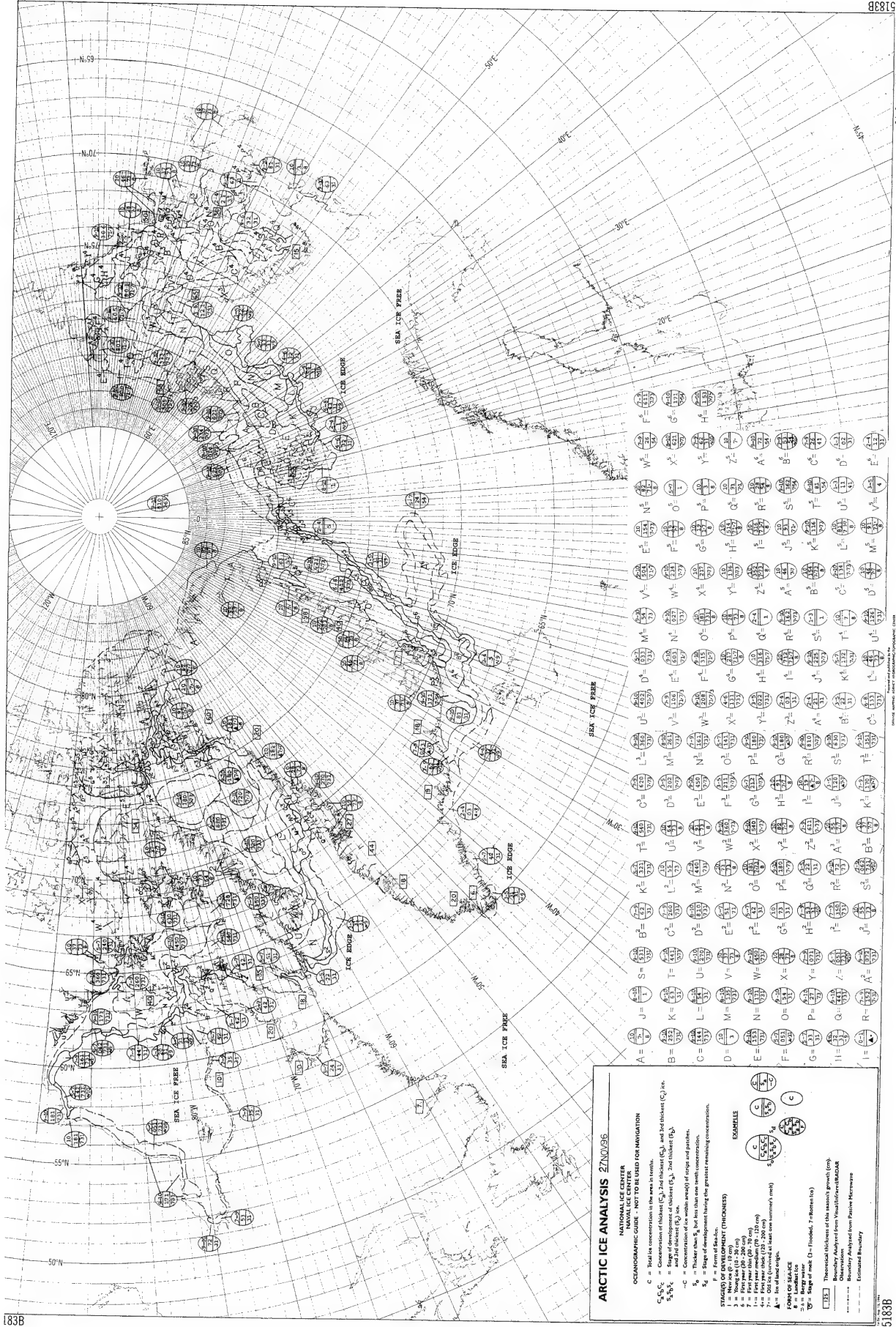
157 = Theoretical thickness of the season's growth (cm).

Boundary Analyzed from Visual Inspection

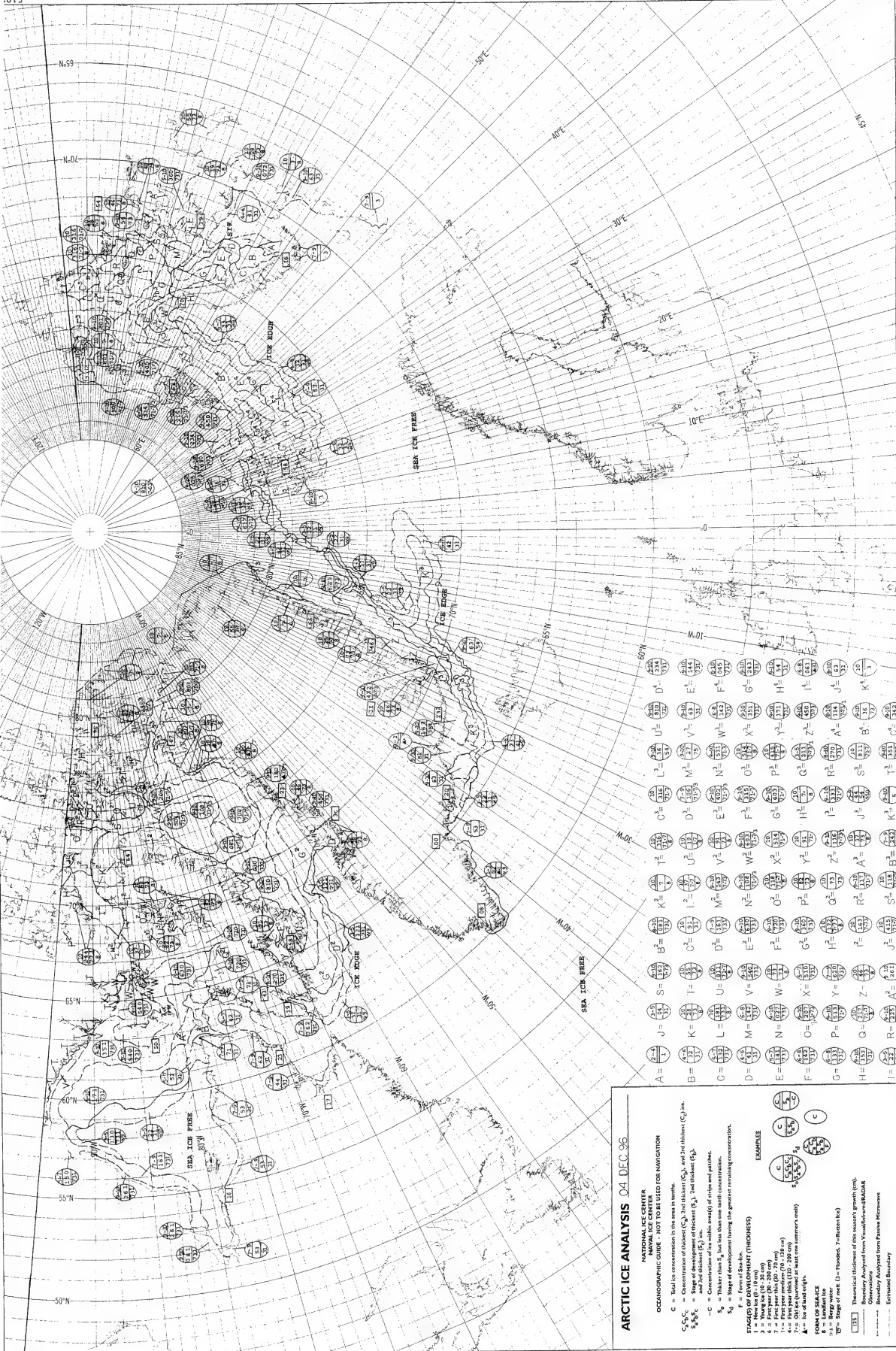
Boundary Analyzed from Passive Microscopy

Estimated Boundary

Refer to 1996 Special Arctic
Supplement for this Chart



**Refer to 1996 Special Arctic
Supplement for this Chart**



ARCTIC ICE ANALYSIS 04 DEC 96

NATIONAL ICE CENTER

ICE ANALYSIS GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.
 C₁ C₂ C₃ = Concentration of ice in tenths (C₁ is the thickest, C₂ is the middle, and C₃ is the thinnest).
 S₁ S₂ S₃ = Thickness of ice in tenths (S₁ is the thickest, S₂ is the middle, and S₃ is the thinnest).
 C₁ = Thicker than S₁, but less than one tenth concentration.
 S₁ = Thicker than S₂, but less than one tenth concentration.
 S₂ = Thicker than S₃, but less than one tenth concentration.
 S₃ = Thicker than S₄, but less than one tenth concentration.

STAGES OF DEVELOPMENT (THICKNESS)

1 = First year (0-100 cm)
 2 = Second year (100-200 cm)
 3 = Third year (200-300 cm)
 4 = Fourth year (300-400 cm)
 5 = Fifth year (400-500 cm)
 6 = Sixth year (500-600 cm)
 7 = Old ice (600-700 cm)
 8 = Old ice (700-800 cm)
 9 = Old ice (800-900 cm)
 10 = Old ice (900-1000 cm)

FORM OF SPACE

1 = Berg water
 2 = Stage of melt (1 = Floating, 2 = Bottom ice)
 3 = Stage of freeze (1 = Floating, 2 = Bottom ice)
 4 = Stage of ice (1 = Floating, 2 = Bottom ice)
 5 = Stage of ice (1 = Floating, 2 = Bottom ice)
 6 = Stage of ice (1 = Floating, 2 = Bottom ice)
 7 = Stage of ice (1 = Floating, 2 = Bottom ice)
 8 = Stage of ice (1 = Floating, 2 = Bottom ice)
 9 = Stage of ice (1 = Floating, 2 = Bottom ice)
 10 = Stage of ice (1 = Floating, 2 = Bottom ice)

Boundary Analyzed from Passive Microwave

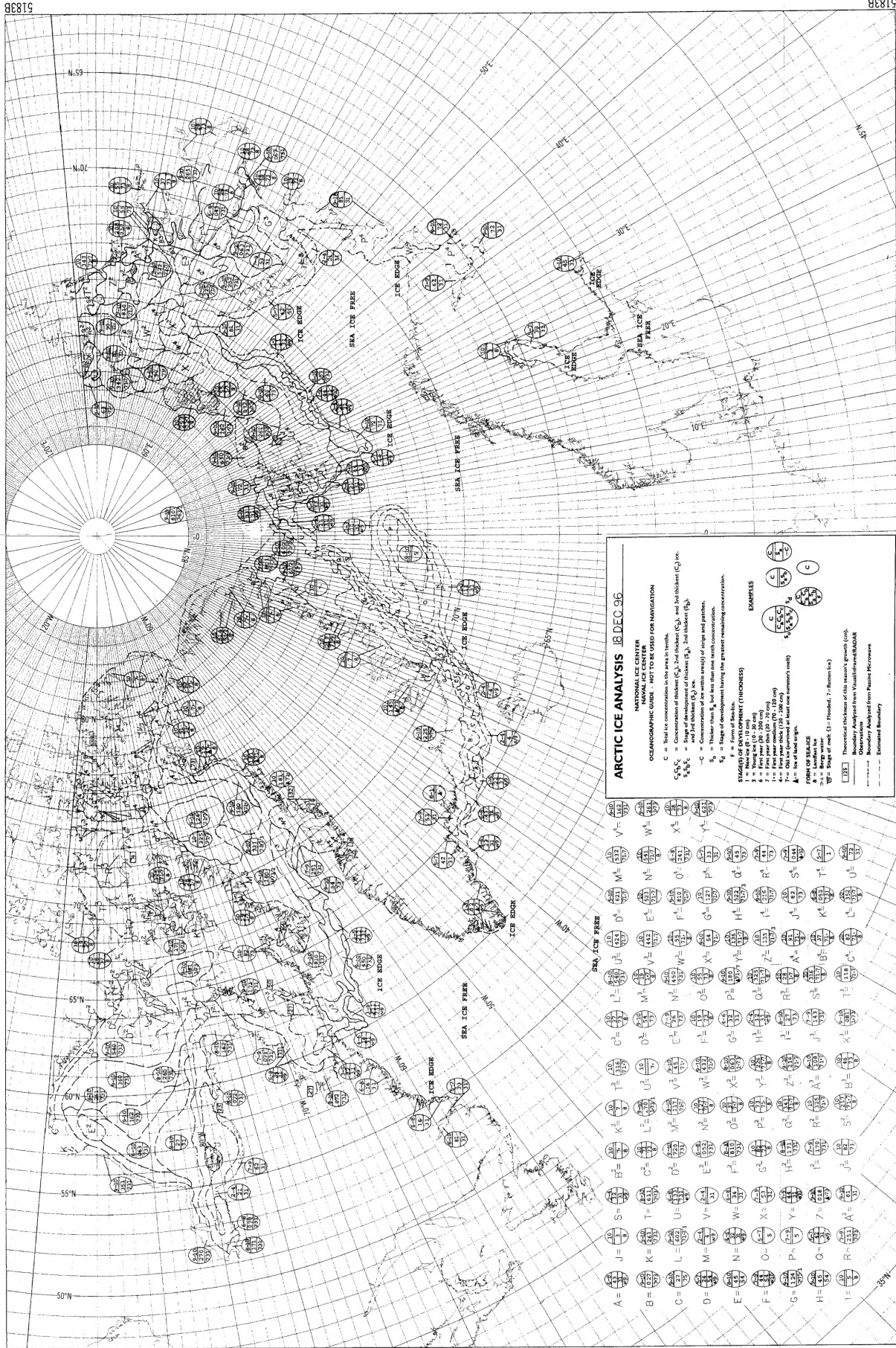
Estimated Boundary

5183B

Refer to 1996 Special Arctic
Supplement for this Chart



Refer to 1996 Special Arctic
Supplement for this Chart



ARCTIC ICE ANALYSIS 18 DEC 96

NATIONAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

Legend:

- C = Total ice concentration in the area in tenths.
- C_1, C_2, C_3 = Concentration of thickest C_1 , 2nd thickest C_2 , and 3rd thickest C_3 ice.
- S_1, S_2, S_3 = Stage of development of thickest S_1 , 2nd thickest S_2 , and 3rd thickest S_3 ice.
- A_1, A_2, A_3 = Area (in tenths) of stage and position.
- S_0 = Thicker than S_1 but less than one tenth concentration.
- S_0 = Stage of development having the greatest remaining concentration.

FORMS OF SEALS:

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year thin (30 - 70 cm)
- 4 = First year thick (70 - 100 cm)
- 5 = First year thick (100 - 150 cm)
- 6 = Ice of last origin.

EXAMPLES:

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year thin (30 - 70 cm)
- 4 = First year thick (70 - 100 cm)
- 5 = First year thick (100 - 150 cm)
- 6 = Ice of last origin.

FORMS OF SEALS:

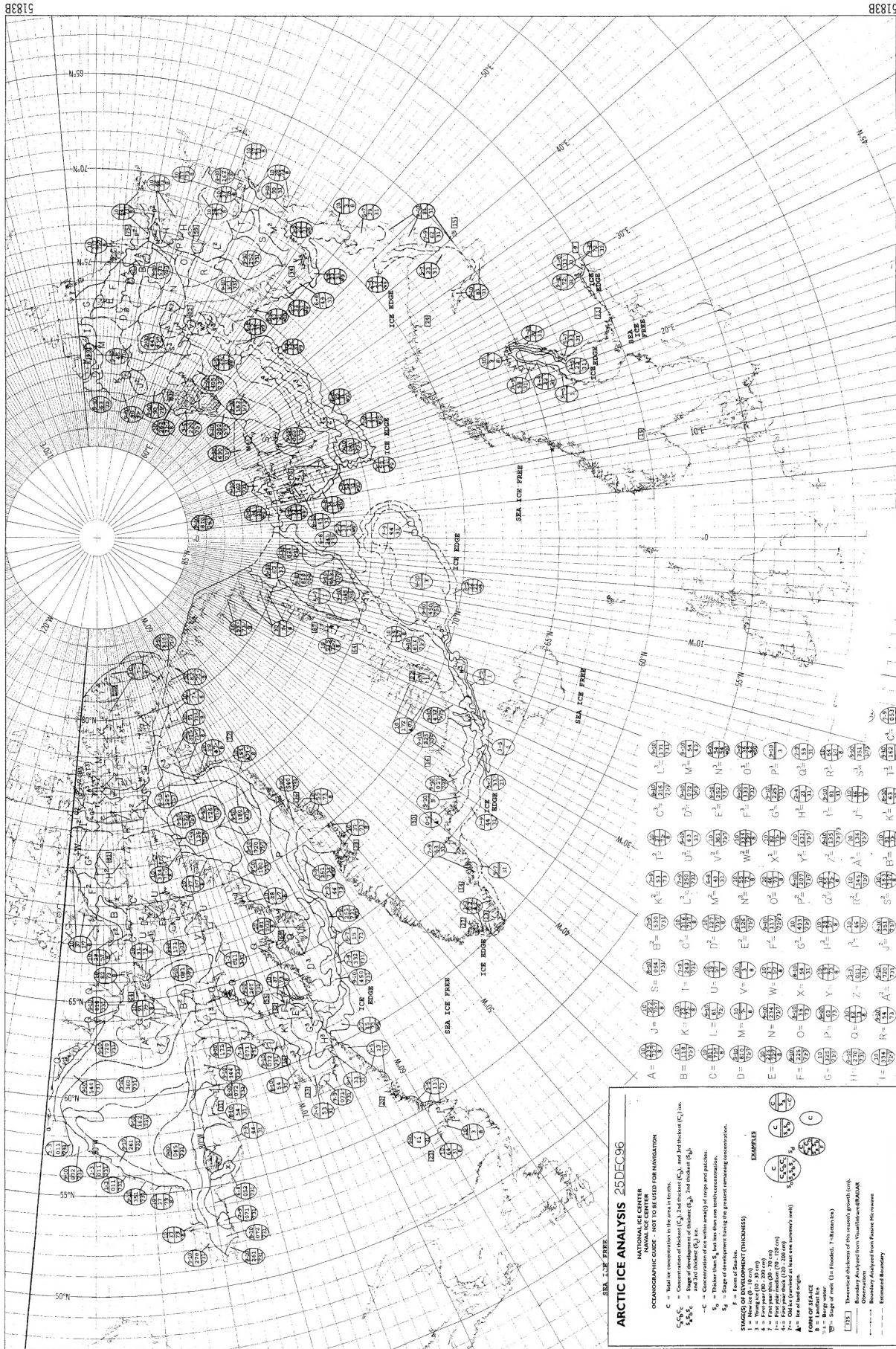
- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year thin (30 - 70 cm)
- 4 = First year thick (70 - 100 cm)
- 5 = First year thick (100 - 150 cm)
- 6 = Ice of last origin.

FORMS OF SEALS:

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year thin (30 - 70 cm)
- 4 = First year thick (70 - 100 cm)
- 5 = First year thick (100 - 150 cm)
- 6 = Ice of last origin.

A = $\frac{1}{10}$	B = $\frac{2}{10}$	C = $\frac{3}{10}$	D = $\frac{4}{10}$	E = $\frac{5}{10}$	F = $\frac{6}{10}$	G = $\frac{7}{10}$	H = $\frac{8}{10}$	I = $\frac{9}{10}$	J = $\frac{10}{10}$
K = $\frac{11}{10}$	L = $\frac{12}{10}$	M = $\frac{13}{10}$	N = $\frac{14}{10}$	O = $\frac{15}{10}$	P = $\frac{16}{10}$	Q = $\frac{17}{10}$	R = $\frac{18}{10}$	S = $\frac{19}{10}$	T = $\frac{20}{10}$
U = $\frac{21}{10}$	V = $\frac{22}{10}$	W = $\frac{23}{10}$	X = $\frac{24}{10}$	Y = $\frac{25}{10}$	Z = $\frac{26}{10}$	AA = $\frac{27}{10}$	AB = $\frac{28}{10}$	AC = $\frac{29}{10}$	AD = $\frac{30}{10}$
AE = $\frac{31}{10}$	AF = $\frac{32}{10}$	AG = $\frac{33}{10}$	AH = $\frac{34}{10}$	AI = $\frac{35}{10}$	AJ = $\frac{36}{10}$	AK = $\frac{37}{10}$	AL = $\frac{38}{10}$	AM = $\frac{39}{10}$	AN = $\frac{40}{10}$
AO = $\frac{41}{10}$	AP = $\frac{42}{10}$	AQ = $\frac{43}{10}$	AR = $\frac{44}{10}$	AS = $\frac{45}{10}$	AT = $\frac{46}{10}$	AU = $\frac{47}{10}$	AV = $\frac{48}{10}$	AW = $\frac{49}{10}$	AX = $\frac{50}{10}$
AY = $\frac{51}{10}$	AZ = $\frac{52}{10}$	BA = $\frac{53}{10}$	BB = $\frac{54}{10}$	BC = $\frac{55}{10}$	BD = $\frac{56}{10}$	BE = $\frac{57}{10}$	BF = $\frac{58}{10}$	BG = $\frac{59}{10}$	BH = $\frac{60}{10}$
BI = $\frac{61}{10}$	BJ = $\frac{62}{10}$	BK = $\frac{63}{10}$	BL = $\frac{64}{10}$	BM = $\frac{65}{10}$	BN = $\frac{66}{10}$	BO = $\frac{67}{10}$	BP = $\frac{68}{10}$	BQ = $\frac{69}{10}$	BR = $\frac{70}{10}$
BS = $\frac{71}{10}$	BT = $\frac{72}{10}$	BU = $\frac{73}{10}$	BV = $\frac{74}{10}$	BW = $\frac{75}{10}$	BX = $\frac{76}{10}$	BY = $\frac{77}{10}$	BZ = $\frac{78}{10}$	CA = $\frac{79}{10}$	CB = $\frac{80}{10}$
CC = $\frac{81}{10}$	CD = $\frac{82}{10}$	CE = $\frac{83}{10}$	CF = $\frac{84}{10}$	CG = $\frac{85}{10}$	CH = $\frac{86}{10}$	CI = $\frac{87}{10}$	CJ = $\frac{88}{10}$	CK = $\frac{89}{10}$	CL = $\frac{90}{10}$
CM = $\frac{91}{10}$	CN = $\frac{92}{10}$	CO = $\frac{93}{10}$	CP = $\frac{94}{10}$	CQ = $\frac{95}{10}$	CR = $\frac{96}{10}$	CS = $\frac{97}{10}$	CT = $\frac{98}{10}$	CU = $\frac{99}{10}$	CV = $\frac{100}{10}$

Refer to 1996 Special Arctic
Supplement for this Chart



ARCTIC ICE ANALYSIS 25 DEC 96

NATIONAL ICE CENTER

OCEANOGRAPHIC CODE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

C₁C₂C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.

S₁S₂S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.

-C = (a) average(s) of ridge and patches.

S₀ = Thicker than S₁, but less than one tenth concentration.

S₀ = Stage of development having the greatest remaining concentration.

P = Form of Sea Ice.

1 = New ice (0-15 cm).

2 = Young ice (16-25 cm).

3 = First year plus (26-35 cm).

4 = First year plus (36-45 cm).

5 = First year plus (46-55 cm).

6 = First year plus (56-65 cm).

7 = First year plus (66-75 cm).

8 = First year plus (76-85 cm).

9 = First year plus (86-95 cm).

A = Ice of unknown age.

B = Landfast ice.

C = Stage of melt. (1 = Frozen, 2 = Melting, 3 = Melted)

Thinning thickness of this season's growth (cm).

Boundary Analyzed from Visual/Infrared/RADAR.

Observation.

Estimated Boundary.

FORM OF SEAS

1 = New ice (0-15 cm).

2 = Young ice (16-25 cm).

3 = First year plus (26-35 cm).

4 = First year plus (36-45 cm).

5 = First year plus (46-55 cm).

6 = First year plus (56-65 cm).

7 = First year plus (66-75 cm).

8 = First year plus (76-85 cm).

9 = First year plus (86-95 cm).

A = Ice of unknown age.

B = Landfast ice.

C = Stage of melt. (1 = Frozen, 2 = Melting, 3 = Melted)

Thinning thickness of this season's growth (cm).

Boundary Analyzed from Visual/Infrared/RADAR.

Observation.

Estimated Boundary.

THICKNESS OF SEAS

1 = New ice (0-15 cm).

2 = Young ice (16-25 cm).

3 = First year plus (26-35 cm).

4 = First year plus (36-45 cm).

5 = First year plus (46-55 cm).

6 = First year plus (56-65 cm).

7 = First year plus (66-75 cm).

8 = First year plus (76-85 cm).

9 = First year plus (86-95 cm).

A = Ice of unknown age.

B = Landfast ice.

C = Stage of melt. (1 = Frozen, 2 = Melting, 3 = Melted)

Thinning thickness of this season's growth (cm).

Boundary Analyzed from Visual/Infrared/RADAR.

Observation.

Estimated Boundary.

EXAMPLE

1 = New ice (0-15 cm).

2 = Young ice (16-25 cm).

3 = First year plus (26-35 cm).

4 = First year plus (36-45 cm).

5 = First year plus (46-55 cm).

6 = First year plus (56-65 cm).

7 = First year plus (66-75 cm).

8 = First year plus (76-85 cm).

9 = First year plus (86-95 cm).

A = Ice of unknown age.

B = Landfast ice.

C = Stage of melt. (1 = Frozen, 2 = Melting, 3 = Melted)

Thinning thickness of this season's growth (cm).

Boundary Analyzed from Visual/Infrared/RADAR.

Observation.

Estimated Boundary.

Point: St. Lawrence, Quebec
100° 00' 00" W
50° 00' 00" N

Point: St. Lawrence, Quebec
100° 00' 00" W
50° 00' 00" N